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NORTH CAROLINA
DEPARTMENT OF CONSERVATION AND DEVELOPMENT
R. BRUCE ETHERIDGE, DIRECTOR

DIVISION OF WATER RESOURCES AND ENGINEERING
W.H.RILEY, PRINCIPAL ENGINEER

HYDROLOGIC DATA
ON THE
NEUSE RIVER BASIN
1866-1945

PREPARED IN COOPERATION WITH
UNITED STATES GEOLOGICAL SURVEY
AND UNITED STATES WEATHER BUREAU
1947

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Forward.....	1
Acknowledgement	2
Description of Water Shed.....	3
Stream Flow.....	4
Stream Gaging Stations in Neuse River Basin.....	5
Contentnea Creek at Hookerton, N. C.	7
Contentnea Creek near Wilson, N. C.	11
Dial Creek near Bahama, N. C.	15
Eno River at Hillsboro, N. C.	19
Flat River at Bahama, N. C.	23
Flat River at Dam near Bahama, N. C.	27
Little River near Princeton, N. C.	31
Middle Creek near Clayton, N. C.	35
Neuse River near Clayton, N. C.	38
Neuse River near Goldsboro, N. C.	42
Neuse River at Kinston, N. C.	46
Neuse River near Northside, N. C.	50
Climatological.....	55
Rainfall Stations.....	57
Temperature Stations.....	59
Goldsboro, N. C.	60
Durham, N. C.	65
New Bern, N. C.	69
Raleigh, N. C.	74
Evaporation.....	82
Lake Michie.....	82
Quality of Water.....	83
Chemical Analyses.....	84
Neuse River near Raleigh, 1906, 1907.....	84
Neuse River near Raleigh, 1932, 1933.....	85
Neuse River near Clayton, N. C.	86
Miscellaneous Analyses.....	87
Public Water Supplies.....	87
Ground Water.....	89
Introduction.....	89
Occurrence of ground water.....	90
Fluctuations of the water table.....	91
Geology and ground-water resources of the Piedmont area.....	92
Gneiss (Pre-Cambrian ?).....	94
Slate and schist (Pre-Cambrian ?).....	95
Granite (Carboniferous ?).....	95
Sedimentary rocks (Triassic).....	96
Public ground-water supplies in the Piedmont area.....	96
Geology and ground-water resources of the Coastal Plain.....	97
Upper Cretaceous series.....	99
Tuscaloosa (?) formation.....	99
Black Creek formation.....	99
Peedee formation.....	100
Eocene series.....	100
Castle Hayne marl.....	100
Miocene series.....	100
Trent marl.....	100
Yorktown formation and Duplin marl.....	101
Pleistocene series.....	101

Contents (continued)

	Page
Public ground-water supplies in the Coastal Plain.....	101
Table of analyses of water from wells in the Piedmont province of Neuse River Basin.....	103
Table of analyses of water from wells in the Coastal Plain province of Neuse River Basin.....	104
Table of wells in the Neuse River Basin.....	105

ILLUSTRATIONS

Map of Neuse River Basin showing Stream Gaging Stations.....	6
Map of Neuse River Basin showing Mean Annual Rainfall Isohyetals.....	56
Map of Neuse River Basin showing Mean Annual Temperature Isotherms.....	58
Map of North Carolina showing where ground-water investigations have been made.	88
Geologic map of Neuse River Basin, showing also the location of municipal and military ground-water supplies in Neuse River Basin.....	93
Cross section of the Coastal Plain from Goldsboro to Cape Lookout showing the geologic formations.....	98

FORWARD

Stream flow records in the Neuse River was started actively in 1925, although there were three records prior to this date. Several stations have been established and soon discontinued which are not shown in this publication. Only stations having a record of ten years or being active at the time of publication are shown. It has been found that short records are very misleading unless the person is very familiar with the use of the records. Daily records of all stations in the Neuse River Basin may be obtained from the Water Resources and Engineering Division of the Department of Conservation and Development, Raleigh, North Carolina or the U. S. Geological Survey, Raleigh, North Carolina.

Every drop of water that flows to the sea without being used to the best of its ability is loss to our communities and government. At the present time large quantities of water flow down our streams without being used. This loss can be saved only by careful study and planning. In the Neuse River Basin water is the greatest natural resource and yet millions of gallons each day flow by without any use being made of them. Water can be made man's best servant instead of his worst enemy only if properly used. An intelligent study of the waters cannot be made unless long and continuous records be kept of flow in these streams.

The Neuse River Basin is abundantly supplied with good water for use of municipalities, industries, recreation and many others. Any community cannot expand unless it has a sufficient supply of good water. The many uses that water has on the daily life of any community is never given a thought as it is so easy to make use of them. By merely opening a faucet or valve all the water needed can be obtained or by pressing a button electricity can be had to do its required task. The average citizen has his attention called to water in times of flood or extreme drought. Floods and droughts appear and some of these conveniences are denied and then the average citizen begins to try to locate and remedy the cause. Without data on our streams it would be impossible to do anything to remedy this trouble as nothing would be known about the water that could be expected. A number of the towns and cities have now reached the point where their present supply is inadequate and other supplies are needed. This publication should be of value in selecting points where the quantity as well as the quality of water will be satisfactory.

Industry is one of the backbones of our civilization. It furnishes employment for the citizens of a community as well as help support the city, county and State Government. Water is required by most industries to either furnish power or to help in the processing of the raw materials. Rigid requirements are made of water in both quantity and quality since most industries must be run during all periods of the year and some elements present in the water will damage the final product. Often the water requirements can be met and the climate will not be satisfactory for the final product. This publication should help solve these problems.

Most of the power sites in this Basin have been developed. The sites where there is no doubt of the flow being sufficient have been developed and now smaller stream flows must be considered if more expansion can be expected. Unless sufficient data can be obtained for these streams full use cannot be made of the available power and companies will not be interested in development unless they are positive there is sufficient flow.

Several rainfall and temperature stations are located in the Neuse River Basin, but records from only four of these are in this publication. These four stations were selected for their length and location. A very good picture of the climatological conditions in any part of the Basin can easily be had from these four stations. More detailed information in regard to the climatological data may be secured from the Water Resources and Engineering Division of the Department of Conservation and Development, Raleigh, North Carolina or the U. S. Weather Bureau, Raleigh, North Carolina.

DESCRIPTION OF WATER SHED

The drainage basin of the Neuse River is oblong in shape, its greatest width being about 46 miles and length about 180 miles, covering an area of approximately 5490 square miles. It flows in a general southeasterly direction from the Piedmont region through the Coastal plain and empties finally into the Pamlico Sound. Although the river basin is approximately 180 miles in length, the river itself measured from its mouth to the longest arm of its source, is approximately 300 miles long.

The Neuse River is formed by the confluence of the Eno River and the Flat River in Durham County. Both of these rivers rise in the Piedmont Plateau in the North Central part of the State and are of nearly equal size.

Neuse River has a total fall from its furthestmost source to its mouth of approximately 600 feet. Its fall by long reaches is as follows: from its furthestmost source to the confluence of Eno and Flat Rivers, 360 feet; from that point to the Falls of the Neuse, 27 feet; Falls of the Neuse, 23 feet; from the Falls of the Neuse to Smithfield, 88 feet; and from Smithfield to the mouth of the stream, 102 feet. The gradient throughout these reaches is very uniform, except the Falls of the Neuse and at Milburnie. There is practically no tidal reaches on this river, although the portion between New Bern and the Mouth is subject to fluctuations due to wind.

The principal tributaries to the Neuse River are the Flat River, Eno River, Little River, Contentnea Creek and Trent River. A brief description of each of these tributaries follows:

Flat River rises in Person County in the Central Piedmont region. The drainage area of this stream is 218 square miles. Its gradient is very steep having a fall from an elevation of approximately 600 feet at its source to 240 feet at its mouth. Throughout its length there are a large number of falls and rapids.

Eno River also rises in Person County in the Central Piedmont region. The drainage area of this stream is 258 square miles. Its gradient is similar to Flat River as it also falls from an elevation of approximately 600 feet at its source to an elevation of 240 feet at its mouth.

Little River rises in Franklin County in the Piedmont region. The drainage area of this stream is 316 square miles. Its gradient is very irregular and quite steep in certain localities, consisting largely of pools and rapids. The elevation of its source is approximately 400 feet and of its mouth at Goldsboro, 48 feet.

Contentnea Creek is formed by the confluence of Moccasin and Turkey Creeks in Wilson County. Most of the territory drained by this stream lies in the Coastal Plain, but its source tributaries extend into the Piedmont region. The elevation of the source of this stream is approximately 300 feet and of its mouth 18 miles below Kinston, 5 feet above mean sea level. Its gradient above Wilson is irregular and quite steep in certain localities, consisting largely of pools and rapids, while below this point the gradient is quite uniform and flat. The drainage area of this stream is approximately 1,000 square miles.

Trent River rises in Lenoir County in the Coastal Plain region. The drainage area of this stream is approximately 510 square miles. Its gradient is comparatively flat and uniform throughout having an elevation of approximately 200 feet at its source and falling to mean sea level at its mouth at New Bern.

The topography of the Neuse River Basin consists largely of rolling hills and deeply eroded valleys, the tops of the hills being the remnants of a former peneplain which has been greatly weathered. This region extends from the sources of the stream

and beyond to a northeast and southwest line roughly defined by the main line of the Atlantic Coast Line Railroad. The elevation of the Piedmont Plateau varies in the Neuse River area from 800 feet at the head waters of the stream to 200 feet where it merges into the Coastal Plain. It is in this region that most of the reservoirs and power sites are found.

The remainder of the drainage area of the Neuse River is embraced in the Coastal Plain. The topography in this region varies from rolling sand hills at its western boundary to almost level land as it approaches the Atlantic Ocean, its larger portion being gently rolling in character. The stream valleys are wide, with much overflow and marsh land. Because of those features practically no reservoirs or power sites are available in the Coastal Plain.

STREAM FLOW

Records of the flow of the Neuse River and its tributaries are numerous, but most of them are of very short duration. Since very short records are of very little importance and are often misleading, it is thought advisable to publish only records of active stations and records of 10 years length. Daily discharge records are available in the office of the U. S. Geological Survey, Raleigh, North Carolina, and the Division of Water Resources and Engineering, Department of Conservation and Development, Raleigh, North Carolina. As these daily discharge records have been published this publication will have weekly discharge and a summary of the daily discharge.

The Neuse River drains portions of the Piedmont Plateau and the Coastal Plain. Each of these physical divisions has entirely different run-off characteristics.

In the Piedmont Plateau the Neuse River is subject to violent freshets and to periods of low flow. The top soil in this region is very shallow and underlain by rock, which causes it to become quickly saturated during periods of heavy precipitation. As the slopes are fairly steep the rate of run-off is very high. Low flow periods are very pronounced during periods of low precipitation due to the lack of storage of ground water in this shallow soil.

The Coastal Plain is composed largely of sand and marine deposits which have a tendency to absorb much moisture. Slopes in this section are flat, resulting in a low rate of run-off during periods of flood. However, much of this water is entirely lost to the streams either through evaporation or percolation and while the normal relationship between run-off and rainfall in this region is higher than in the Piedmont Plateau, the streams are nevertheless subject to periods of drought. At times, the soil of this section becomes saturated prior to heavy rainfall, and due to the flat slopes, large areas are inundated. The fact that this area has a slow flood run-off causes the water to be present when the floods from the Piedmont Plateau arrive. Such conditions cause prolonged high stages on the streams of the section.

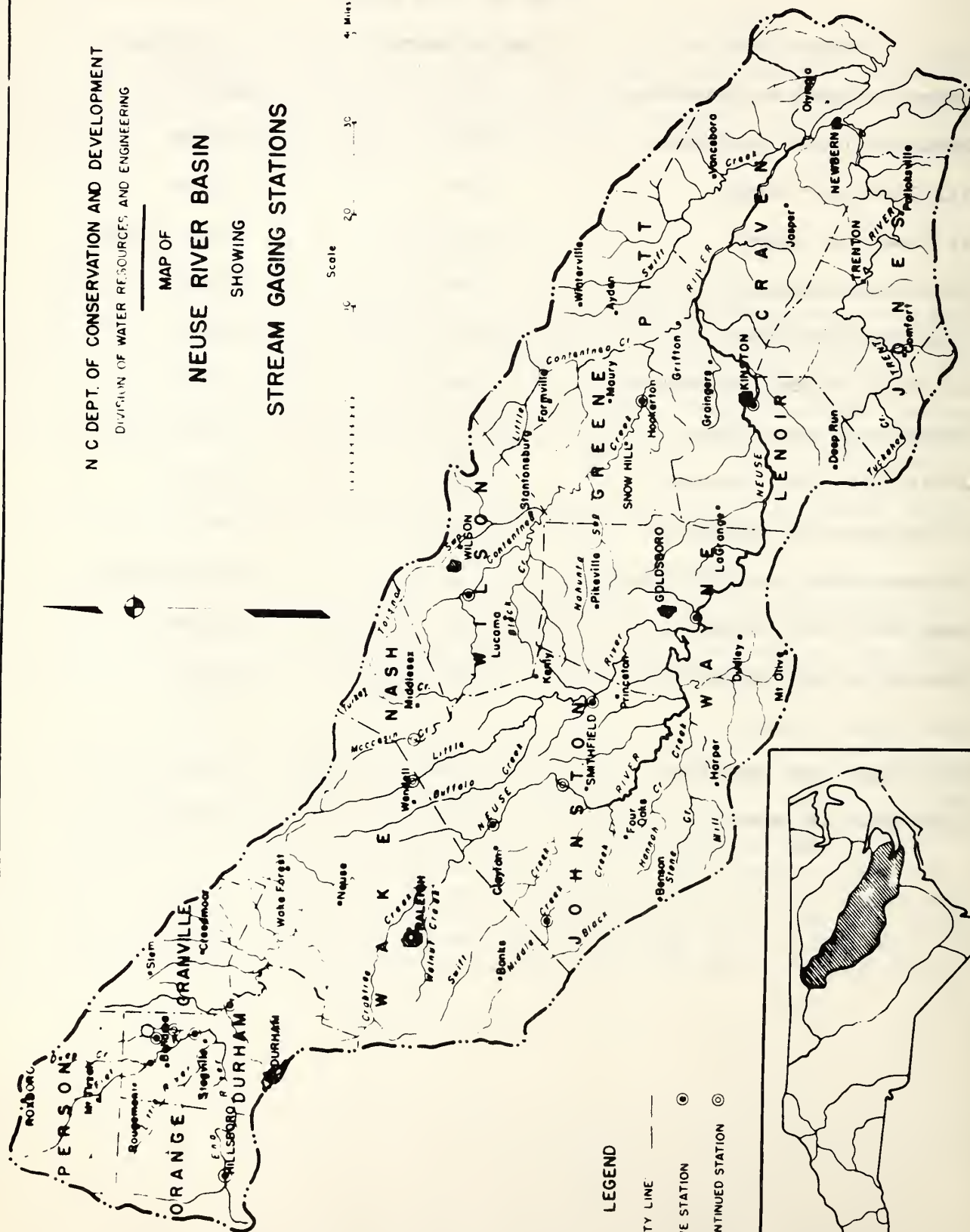
STREAM GAGING STATIONS
IN NEUSE RIVER BASIN

Name of Station	Length Record	Status
Contentnea Creek at Hookerton	17	Active
Contentnea Creek near Wilson	14	Active
Dial Creek near Bahama	20	Active
Dry Creek near Bahama	4	Discontinued
Eno River at Hillsboro	15	Active
Flat River near Bahama	20	Active
Flat River at Dam near Bahama	18	Active
Little Creek near Zebulon	1	Discontinued
Little River near Princeton	14	Active
Middle Creek near Clayton	6	Active
Moccassin Creek near Middlesex	2	Discontinued
Neuse River near Clayton	18	Active
Neuse River near Goldsboro	15	Active
Neuse River at Kinston	15	Active
Neuse River near Northside	18	Active
Neuse River at Selma	4	Discontinued

N C DEPT. OF CONSERVATION AND DEVELOPMENT
DIVISION OF WATER RESOURCES, AND ENGINEERING

MAP OF
NEUSE RIVER BASIN
SHOWING
STREAM GAGING STATIONS

Scale 10 20 30 Miles



LEGEND

- COUNTY LINE —
- ACTIVE STATION ●
- DISCONTINUED STATION ⊙



Contentnea Creek at Hookerton, N. C.

Location.- Water-stage recorder, lat 35 25'40", long. 77 35'65", at Hookerton, Green County, about 300 feet downstream from highway bridge and 2 $\frac{1}{2}$ miles upstream from Wheat Swamp Creek.

Drainage area.- 789 square miles.

Records available.- November 1928 to date.

Average discharge.- 17 years, 509 million gallons per day.

Extremes.- 1928-45: Maximum discharge 7,170 million gallons per day Oct. 6, 1929 (gage height, 18.9 feet), from rating curve extended above 4,650 million gallons per day; minimum, 8.4 million gallons per day Sept. 16, 17, 1932 (gage height, 1.17 feet).

Remarks.- Practically no regulation. Automatic recorder installed November 26, 1934. Staff gage prior to this date.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1928												442	
1929	1124	1150	2048	565	788	802	1421	536	659	2371	1376	1234	1176
1930	1001	975	559	450	120	605	130	64.4	83.3	46.8	66.5	139	353
1931	382	243	279	652	513	129	154	956	248	140	64.4	209	333
1932	384	704	481	203	208	244	48.0	67.8	15.3	62.0	170	628	267
1933	769	1169	645	704	300	120	260	193	101	24.3	27.9	41.8	357
1934	59.8	154	342	749	220	353	704	646	879	180	174	766	444
1935	901	457	503	808	390	278	763	366	686	96.9	281	422	496
1936	1569	1713	1253	1591	162	549	455	616	117	646	671	1280	882
1937	1263	2134	926	1323	782	135	289	382	329	100	154	297	670
1938	432	273	276	733	168	611	541	261	527	211	136	310	577
1939	530	1596	1634	476	344	296	1394	1363	760	137	205	212	745
1940	443	560	532	497	198	229	130	995	158	70.4	179	135	348
1941	293	424	636	685	127	125	1074	185	52.8	31.9	46.2	123	317
1942	109	235	690	313	364	101	91.1	288	287	1765	406	625	443
1943	921	900	773	721	308	379	874	121	63.7	36.6	55.2	124	437
1944	622	869	1815	1112	250	76.2	78.2	240	36.6	271	132	423	494
1945	450	710	636	160	138	103	520	775	1296	257	299	772	508

Contentnea Creek at Hookerton, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1928												1190	
1929	2450	1930	3150	1110	1560	1560	2260	1090	1320	7110	2110	1760	7110
1930	1800	1470	1090	782	297	1290	309	121	195	80	75	462	1800
1931	665	333	526	1320	879	449	567	1320	724	494	103	368	1320
1932	494	820	1060	286	309	344	92	380	23	110	393	1240	1240
1933	1270	1500	1160	1360	782	286	574	574	264	42	37	48	1660
1934	135	242	724	1160	468	1110	1600	1380	1560	481	443	1470	1600
1935	1320	801	1010	1110	801	494	1690	801	1930	222	623	1010	1930
1936	2530	3090	1980	4310	328	1760	1140	1980	296	1420	1560	2500	4310
1937	2500	4730	1300	3090	3170	297	1380	1160	1010	156	410	422	4730
1938	685	348	445	1670	297	1250	1320	1250	1540	481	278	623	1670
1939	885	2230	3430	1010	685	736	3570	3310	2780	469	390	483	3570
1940	769	924	1030	711	306	394	568	3940	297	98	397	446	3940
1941	433	827	1170	1230	368	296	2800	318	117	85	65	260	2800
1942	191	424	1290	678	840	256	297	614	963	4280	795	1030	4280
1943	1750	1620	1330	1360	711	1360	2000	297	123	56	81	422	2000
1944	1200	1300	3300	2000	604	197	267	782	67	782	321	592	3300
1945	840	1300	1300	290	322	266	1580	1540	3680	508	485	1140	3680

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1928												205	
1929	475	462	1290	333	297	195	462	205	333	359	782	801	195
1930	449	514	321	261	75	80	66	48	45	43	56	63	43
1931	185	176	149	140	106	45	50	63	80	65	39	68	39
1932	309	574	298	135	153	92	16	21	8.4	17	71	135	8.4
1933	443	769	242	222	110	53	68	71	48	9.7	12	28	9.7
1934	32	84	135	284	116	144	162	222	298	81	71	417	32
1935	534	309	298	520	211	201	191	242	153	65	92	156	65
1936	405	585	623	370	78	75	133	109	76	188	213	410	75
1937	672	1340	559	507	133	89	79	98	62	65	78	191	62
1938	227	220	186	222	78	186	128	63	59	99	127	204	59
1939	258	1060	533	258	128	107	218	278	143	77	125	136	77
1940	209	333	243	306	127	87	49	39	75	56	56	128	39
1941	178	224	296	182	51	56	120	96	37	22	36	42	22
1942	83	158	203	116	105	58	29	51	68	63	274	297	29
1943	459	381	308	331	123	90	140	68	34	29	37	51	29
1944	300	259	588	547	121	38	36	47	28	59	83	244	28
1945	27.4	258	218	101	77	52	58	207	233	155	151	220	52

Mean Weekly Discharge in Million Gallons per day

Week Ending	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Jan. 7		801	652	276	379	801	47	801	956	827	256
14		1630	499	260	319	527	50	1060	2380	1500	621
21		1690	1090	619	380	833	48	1050	1710	1150	459
28		556	1660	416	429	736	67	685	1510	1240	393
Feb. 4		646	1160	248	572	1270	134	769	762	3330	370
11		602	1400	182	724	911	115	399	1490	2710	293
18		1090	898	249	775	1360	150	390	2110	1520	264
25		1820	736	314	691	1270	197	530	2470	1430	233
Mar. 4		2330	516	209	547	756	164	384	1050	1280	247
11		3030	638	253	468	536	158	403	704	1200	244
18		1760	775	180	743	582	362	501	1460	769	412
25		1390	471	265	384	782	434	486	1900	963	256
Apr. 1		1470	360	481	309	614	563	743	1100	594	207
8		717	475	609	260	280	537	930	1180	775	311
15		380	659	1150	196	367	782	930	3590	2220	1560
22		583	344	769	202	937	930	618	1350	672	769
29		529	359	202	154	1290	833	743	509	1280	439
May 6		426	203	171	241	415	203	459	297	2510	156
13		562	116	665	216	524	127	257	191	743	86
20		633	121	534	217	149	267	227	134	354	209
27		1120	82	473	171	216	340	561	101	214	162
June 3		1240	108	603	185	216	147	439	79	145	267
10		402	256	126	237	100	318	317	127	148	474
17		544	1220	101	301	90	402	282	178	103	434
24		1500	724	147	309	84	370	276	608	176	597
July 1		711	357	50	123	194	376	214	1530	120	1200
8		1740	147	65	80	235	532	273	879	203	904
15		1140	85	332	65	89	795	525	329	95	236
22		1890	199	141	30	161	545	1450	229	208	165
29		1270	101	110	18	459	827	866	321	359	560
Aug. 5		502	90	211	24	526	969	678	1350	1080	956
12		496	67	1030	39	159	678	362	975	311	254
19		541	56	1230	52	141	576	289	247	151	115
26		287	56	1180	173	97	364	337	129	116	79
Sept. 2		904	49	711	23	117	1110	304	232	711	176
9		633	61	270	15	72	1000	711	132	629	169
16		801	165	373	9.7	123	444	1640	89	317	74
23		691	65	123	15	134	1310	297	92	109	711
30		494	53	210	21	74	577	176	117	70	1230
Oct. 7		3840	49	260	19	34	355	143	782	72	348
14		2600	45	106	79	34	191	98	386	100	161
21		486	44	121	52	23	120	78	995	110	119
28		2420	43	103	85	14	95	74	537	121	203
Nov. 4		1930	65	59	83	14	81	92	307	95	204
11		1820	68	57	107	24	169	165	362	88	171
18		1470	70	74	120	34	141	455	1210	177	151
25		891	64	79	269	32	142	393	788	163	189
Dec. 2	229	1360	62	58	253	30	443	193	486	278	267
9	253	1710	87	126	175	39	1240	172	556	391	266
16	227	1300	108	220	393	41	711	433	1330	246	347
23	372	891	219	189	1140	47	502	820	2310	206	220
31	911	995	354	323	879	44	659	339	1180	324	402
Maximum		3840	1660	1230	1140	1360	1310	1640	3590	3330	1560
Minimum		287	43	50	9.7	14	47	74	79	70	74

Contentnea Creek at Hookerton, N. C.

Mean Weekly Discharge in Million Gallons per day (continued)

Year	1939	1940	1941	1942	1943	1944	1945				
Jan. 7	534	293	334	116	628	486	355				
14	309	353	233	98	597	490	736				
21	531	512	279	94	610	950	457				
28	659	576	270	109	1540	678	327				
Feb. 4	982	436	375	189	1580	320	266				
11	1200	458	298	178	1200	397	370				
18	1830	795	525	182	904	1120	672				
25	1860	586	556	369	453	1260	1100				
Mar. 4	2430	446	339	228	359	1060	1190				
11	2830	353	698	636	730	1110	963				
18	1390	547	969	1040	866	2000	565				
25	930	820	377	635	646	2300	422				
Apr. 1	555	501	717	704	1180	2260	255				
8	432	539	1100	415	691	1060	162				
15	379	426	769	395	451	975	125				
22	469	576	300	267	691	1720	128				
29	636	449	534	146	1010	711	204				
May 6	508	259	269	200	282	435	161				
13	465	176	166	532	209	324	104				
20	303	151	97	632	242	165	118				
27	169	200	68	201	331	163	132				
June 3	233	273	57	105	432	199	212				
10	466	271	74	65	163	98	106				
17	159	247	178	195	1000	65	99				
24	404	233	99	80	211	54	72				
July 1	182	113	194	67	193	43	101				
8	789	71	384	47	470	43	66				
15	1280	152	988	40	1290	52	83				
22	579	270	2390	36	1690	163	775				
29	2460	62	891	229	342	59	1170				
Aug. 5	2860	45	194	109	154	393	678				
12	633	244	121	65	95	473	917				
19	521	950	158	443	151	121	261				
26	1600	2900	219	551	125	63	853				
Sept. 2	2180	364	213	186	96	48	1020				
9	1900	193	65	267	59	37	529				
16	263	205	50	730	41	35	640				
23	205	110	43	130	61	37	2130				
30	162	87	39	74	82	34	2150				
Oct. 7	324	71	34	103	41	594	368				
14	156	78	26	982	33	200	313				
21	122	62	23	4020	32	86	185				
28	101	72	25	2340	38	268	190				
Nov. 4	126	70	60	730	40	101	174				
11	193	93	48	361	53	92	267				
18	138	260	50	439	69	141	403				
25	293	247	41	294	48	139	346				
Dec. 2	219	182	42	366	60	280	236				
9	158	162	110	422	72	525	561				
16	146	139	102	891	74	554	924				
23	141	167	93	691	70	327	859				
31	388	257	199	592	278	290	885				
Maximum	2860	2900	2390	4020	1690	2300	2150				
Minimum	101	45	23	36	32	34	66				

Contentnea Creek near Wilson, N. C.

Location.- Water-stage recorder, lat. 35°41'15", long. 77°56'50", at bridge on U. S. Highway 301, just downstream from municipal power plant, 1 mile upstream from Atlantic Coast Line Railroad bridge, and 3 miles southwest of Wilson, Wilson County.

Drainage area.- 236 square miles.

Records available.- February 1930, to date.

Average discharge.- 15 years, 160 million gallons per day.

Extremes.- 1930-45: Maximum discharge, 3,120 million gallons per day Aug. 17, 1940 (gage height, 13.80 feet); minimum, about 0.13 million gallons per day Oct. 6 - 15, 1932, Nov. 24 to Dec. 26, 1933.

Maximum stage known, about 24.3 feet in September 1924.

Remarks.- Extreme diurnal fluctuation and considerable regulation for short periods during low flow caused by municipal power plant above station. City of Wilson diverts water for municipal use above station. Automatic recorder installed June 23, 1934; staff gage prior to this date.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1930			182	159	34.3	198	42.7	13.0	13.6	1.03	16.2	65.9	
1931	120	85.9	110	224	242	44.8	180	385	160	20.0	11.4	132	143
1932	182	206	212	98.2	70.4	64.6	5.04	12.1	1.42	22.6	80.8	254	101
1933	321	304	170	218	55.5	31.5	33.3	27.1	6.03	1.05	.19	1.16	96.3
1934	6.04	22.2	120	239	48.4	149	260	293	185	45.4	68.5	307	143
1935	357	167	260	285	131	21.4	216	22.5	145	17.4	76.9	104	151
1936	581	595	393	529	36.4	237	110	143	17.3	118	190	399	278
1937	599	530	257	555	113	19.5	180	156	119	31.1	46.2	85.9	216
1938	136	76.2	96.3	189	68.5	298	194	86.6	226	51.2	58.3	141	135
1939	183	617	460	171	127	138	793	529	150	37.1	45.3	62.7	275
1940	108	191	193	178	76.2	90.4	48.2	385	46.8	14.4	53.5	67.8	121
1941	113	139	209	159	24.0	25.1	226	36.5	8.14	1.74	7.49	35.5	82.0
1942	36.7	91.1	228	93.0	166	21.9	14.2	125	168	576	121	221	156
1943	393	266	275	178	76.9	129	360	10.1	4.72	4.02	10.3	35.7	145
1944	210	282	619	399	59.0	13.4	33.1	101	5.25	149	50.9	156	173
1945	177	313	216	65.9	64.3	33.7	248	284	424	69.1	78.2	331	191

Contentnea Creek near Wilson, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1930			535	475	156	814	141	90	116	1	104	231	
1931	283	160	247	743	833	265	743	1300	1200	112	40	320	1300
1932	523	416	638	320	301	231	25	87	3	174	212	576	638
1933	904	535	839	638	167	231	207	231	88	2.1	3.9	14	904
1934	28	76	308	672	160	775	1310	1140	517	196	499	1430	1430
1935	659	355	659	491	557	80	957	98	988	50	247	375	988
1936	1040	1710	988	2490	143	943	370	711	53	367	629	924	2490
1937	2910	2140	479	1870	488	57	885	698	469	143	161	165	2910
1938	304	183	221	762	190	840	795	357	1700	114	149	396	1700
1939	329	1320	1210	636	399	1210	2100	2000	1450	123	155	154	2100
1940	172	352	510	349	178	307	401	2640	104	34	174	171	2640
1941	207	328	502	355	52	151	743	233	11	3.6	27	158	743
1942	149	246	572	247	872	143	118	404	1030	2220	224	452	2220
1943	1230	595	637	578	280	571	1450	16	32	13	35	159	1450
1944	623	510	1670	1230	174	85	268	590	63	1050	223	374	1670
1945	444	607	461	214	256	114	943	840	2250	166	159	762	2250

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1930			39	5.1	5.1	5.1	3.7	1	1	1	.9	1	
1931	41	41	32	28	1.0	2.2	2.8	42	4.1	3.0	1.6	2.5	1.0
1932	29	63	54	19	7.8	4.1	1.2	1.1	.4	.1	7.8	32	0.1
1933	78	198	63	36	3.0	3.4	1.8	2.5	1.8	.5	.1	.1	.1
1934	.3	.3	.6	16	3.9	17	4.4	4.1	32	3.7	5.6	61	.3
1935	158	32	30	87	4.9	2.7	6.1	5.0	5.7	8.4	9.0	12	2.7
1936	117	167	143	83	14	12	9.7	10	8.4	9.0	14	79	8.4
1937	218	224	138	84	3.2	2.6	7.8	12	12	5.8	4.5	17	2.6
1938	28	45	44	48	3.9	28	12	13	11	14	17	36	3.9
1939	37	247	145	36	9.0	14	25	45	1.3	8.4	16	16	1.3
1940	22	21	20	41	21	17	14	7.1	9.7	7.1	6.5	16	6.5
1941	30	30	28	28	9.0	13	7.1	9.0	3.6	.5	.8	7.8	0.5
1942	12	9.0	15	9.7	7.1	7.1	.9	6.5	6.1	13	7.8	87	0.9
1943	99	9.0	81	30	12	9.7	13	3.2	1.3	2.2	4.1	4.9	1.3
1944	39	7.8	140	116	7.8	7.8	3.9	9.7	2.4	7.1	9.0	13	2.4
1945	60	32	19	11	11	15	21	13	16	19	26	28	11

Mean Weekly Discharge in Million Gallons per day

Week Ending	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
Jan. 7		67	116	232	0.5	419	569	405	81	184	64
14		131	335	218	9.0	451	788	472	238	111	112
21		191	145	266	3.9	180	612	397	118	208	142
28		103	105	470	9.7	447	528	360	127	207	123
Feb. 4		72	230	375	14	177	202	1740	130	282	90
11		61	273	256	15	121	638	446	67	492	227
18		101	225	446	27	241	1160	417	66	904	214
25		114	163	289	23	143	402	430	67	542	218
Mar. 4		90	99	205	37	259	223	290	81	995	142
11	298	89	435	186	57	136	182	275	85	610	118
18	172	59	172	123	109	259	556	273	150	384	298
25	162	151	122	247	152	141	632	250	77	276	209
Apr. 1	105	165	205	95	224	475	302	180	85	158	178
8	213	395	143	103	131	362	853	704	101	134	138
15	208	324	112	125	419	339	969	623	510	116	193
22	141	100	59	452	292	165	179	171	92	312	198
29	90	91	52	234	138	295	118	769	85	121	194
May 6	52	75	63	78	50	83	71	333	23	289	81
13	34	413	48	59	28	55	362	111	22	121	50
20	39	124	39	23	87	62	36	90	103	111	74
27	16	443	31	39	36	355	21	44	97	41	96
June 3	34	56	151	72	63	54	16	30	98	78	118
10	124	33	21	15	146	32	70	14	410	57	74
17	271	72	165	35	92	21	89	16	90	40	147
24	389	47	54	4.5	308	16	599	32	519	153	71
July 1	63	19	26	65	52	6.3	255	17	275	479	24
8	44	198	15	37	141	45	250	24	177	516	18
15	31	182	3.0	6.4	381	123	42	23	30	342	136
22	71	258	2.4	73	72	581	58	24	26	543	32
29	25	145	1.4	19	429	152	57	203	481	1650	21
Aug. 5	41	256	1.2	24	191	68	441	380	178	439	10
12	11	405	43	57	266	39	135	41	103	123	25
19	8.4	698	5.0	8.4	147	21	32	33	18	588	1280
26	6.5	311	3.0	25	109	16	23	43	14	561	345
Sept. 2	1.1	56	3.0	17	623	11	91	523	172	1210	69
9	17	444	3.0	17	165	449	20	172	45	187	70
16	31	34	1.1	2.3	109	156	21	144	14	54	51
23	6.5	25	.7	1.8	293	47	14	29	724	49	26
30	2.5	178	.5	1.8	171	21	8.4	18	181	40	37
Oct. 7	1.0	22	.3	1.6	87	23	74	34	73	68	16
14	1.0	14	.1	1.3	50	15	160	34	32	26	11
21	1.0	34	75	.9	28	11	213	21	30	47	12
28	1.0	16	12	.6	33	17	54	40	73	15	22
Nov. 4	16	9.2	29	.4	25	21	34	28	48	26	8.4
11	14	10	98	.2	35	79	211	26	52	38	17
18	12	12	45	.2	41	152	377	56	36	30	118
25	16	14	131	.2	45	57	125	45	67	84	49
Dec. 2	17	12	72	.1	466	37	123	78	89	38	52
9	36	196	47	.1	519	42	201	102	138	36	39
16	30	129	275	.1	113	158	624	62	120	37	42
23	76	98	364	.1	224	152	691	57	77	35	61
31	129	138	360	4.1	163	78	192	118	234	136	129
Maximum		698	435	470	623	581	1160	1740	724	1650	1280
Minimum		9.2	.1	.1	.5	6.3	8.4	14	14	15	8.4

Mean Weekly Discharge in Million Gallons per day

Week Ending	1941	1942	1943	1944	1945					
Jan. 7	114	33	222	199	153					
14	70	26	224	112	327					
21	131	30	544	450	143					
28	107	37	513	134	123					
Feb. 4	142	68	463	80	85					
11	123	69	461	149	163					
18	207	74	207	397	379					
25	121	155	132	403	473					
Mar. 4	101	109	94	249	431					
11	290	331	419	574	357					
18	213	200	192	605	169					
25	96	218	254	1120	112					
Apr. 1	318	217	327	379	78					
8	262	81	123	268	41					
15	166	183	124	633	36					
22	68	51	286	475	75					
29	126	36	189	251	111					
May 6	38	134	61	99	49					
13	34	391	81	68	30					
20	21	149	48	28	83					
27	14	61	103	55	43					
June 3	12	20	65	56	111					
10	22	19	119	15	38					
17	39	42	270	9.7	26					
24	21	16	43	9.0	29					
July 1	23	14	132	7.8	40					
8	201	6.1	474	6.5	21					
15	341	1.0	691	4.1	41					
22	403	1.0	326	122	730					
29	36	36	75	9.7	251					
Aug. 5	36	23	22	270	340					
12	13	32	14	139	297					
19	14	244	15	22	89					
26	65	253	5.0	11	442					
Sept. 2	53	45	2.6	9.7	159					
9	9.7	286	1.3	3.6	130					
16	10	335	1.3	2.6	145					
23	7.8	30	7.1	2.5	1340					
30	4.5	46	10	11	185					
Oct. 7	2.3	25	3.9	452	82					
14	2.1	439	4.7	28	81					
21	2.5	1610	2.7	45	44					
28	.6	349	4.1	124	73					
Nov. 4	.8	211	5.7	28	57					
11	14	112	12	30	86					
18	5.0	135	12	42	102					
25	5.2	98	10	54	66					
Dec. 2	10	126	15	158	71					
9	42	172	14	213	362					
16	25	34	12	188	262					
23	25	202	15	90	315					
31	56	203	97	99	444					
Maximum	403	1610	691	1120	1340					
Minimum	.6	1.0	1.3	2.5	21					

Dial Creek near Bahama, N. C.

Location.- Water-stage recorder and combination 90°V-notch and masonry weir, lat. 36°10'50", long. 78°51'55", three-eighths of a mile upstream from mouth and Lake Michie, and 3 miles northeast of Bahama, Durham County.

Drainage area.- 4.9 square miles.

Records available.- October 1925 to date

Average discharge.- 20 years, 2.69 million gallons per day.

Extremes.- 1925-45: Maximum discharge, 1,320 million gallons per day May 24, 1940 (gage height, 7.60 feet), from rating curve extended above 40 million gallons per day; no flow at times in 1926, 1930-33, 1941. Minimum discharge 0.0 million gallons per day several days in 1926, 1930-33, 1941, 1943 and 1944.

Remarks.- Records good. Discharge below 9 million gallons per day determined by use of 2-foot, 90° V-notched weir formula, rating for which was checked by discharge measurements. Automatic recorder from October 29, 1925 to date.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1925											0.368	.866	
1926	2.97	9.24	2.98	2.08	.364	.191	.214	.085	.057	.035	.242	2.81	1.73
1927	1.12	3.23	3.06	1.98	.501	.814	.982	1.03	.494	1.01	.620	4.06	1.58
1928	1.54	3.18	2.75	8.91	2.58	3.84	.685	1.36	7.82	.956	.801	.782	2.93
1929	.885	6.72	8.34	3.94	3.07	2.61	2.00	2.90	.788	8.53	3.40	2.73	3.81
1930	3.40	4.10	2.02	1.90	2.14	1.12	1.57	.211	.187	.045	.402	1.27	1.52
1931	1.53	.866	2.22	4.11	1.96	.943	.173	2.54	.061	.008	.018	.523	1.25
1932	3.37	1.96	4.78	1.96	.775	.181	.006	.000	.000	1.60	3.00	5.18	1.91
1933	3.79	3.85	1.80	3.09	1.07	.189	.439	1.01	.069	.000	.006	.129	1.27
1934	0.201	1.67	3.81	7.43	2.46	4.04	1.96	1.09	3.75	.711	5.27	4.53	3.07
1935	3.90	2.78	6.22	9.63	2.39	.543	1.38	.528	2.59	.566	1.89	2.36	2.89
1936	13.2	10.0	7.30	12.0	1.20	2.36	2.97	1.87	1.44	1.56	1.10	4.75	4.96
1937	11.1	5.36	3.49	8.53	2.00	2.02	1.00	3.44	1.78	3.36	1.94	1.56	3.79
1938	4.34	2.05	2.98	2.49	.853	7.24	10.5	3.37	1.03	.636	1.98	3.13	3.40
1939	4.46	10.8	7.42	4.41	4.77	2.13	3.23	7.24	1.18	1.19	1.14	1.41	4.08
1940	1.91	5.14	3.91	4.77	6.26	3.48	1.11	2.71	.500	.234	4.21	2.33	3.04
1941	2.55	1.62	3.47	2.76	.596	1.23	.724	.170	.124	.000	.016	.252	1.12
1942	2.328	2.03	2.80	.885	2.78	.956	2.60	3.54	.795	2.56	2.60	6.02	2.34
1943	4.65	4.25	5.14	4.65	1.57	.924	1.09	.073	.172	.013	.162	.439	1.91
1944	2.25	4.91	6.40	5.28	1.65	.246	.672	.515	4.97	1.87	1.89	2.91	2.78
1945	3.46	7.75	2.86	2.41	1.63	.736	9.50	2.95	11.4	1.77	1.49	7.43	4.43

Dial Creek near Bahama, N. C.
Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1925											2.07	5.6	
1926	54.9	101	8.3	12.9	.90	1.68	2.52	1.26	1.20	.89	2.20	26.5	101
1927	4.07	12.0	13.6	5.5	1.23	7.4	5.8	10.1	7.9	6.2	3.88	16.2	16.2
1928	5.6	14.9	19.4	127	24.5	47.8	6.6	12.5	93.7	1.63	1.43	1.22	127
1929	1.83	31.5	38.5	45.2	9.6	20.0	10.5	20.7	1.93	119	9.6	8.3	119
1930	14.9	21.3	4.01	7.2	25.8	5.5	20.7	1.80	2.82	.56	2.11	7.0	25.8
1931	4.33	1.30	16.2	20.7	9.4	9.6	1.96	38.1	.23	.03	.06	2.75	38.1
1932	31.7	6.5	60.1	5.9	3.07	.70	.05	.00	.00	32.9	20.7	16.8	60.1
1933	12.7	12.0	3.00	16.2	2.96	1.30	7.1	10.1	.61	.00	.01	.36	16.2
1934	0.50	17.4	25.2	83.3	16.8	20.7	21.9	11.8	27.8	2.24	109	54.9	109
1935	26.5	5.9	30.4	62.0	15.5	1.06	11.9	2.39	31.7	5.4	11.0	22.0	62.0
1936	97.5	80.1	52.3	82.0	2.25	22.6	44.6	15.5	11.6	16.8	3.88	27.1	97.5
1937	28.4	15.5	5.8	46.5	4.52	12.9	5.0	18.1	15.5	27.1	7.1	3.11	46.5
1938	44.6	6.3	16.2	18.1	2.21	46.5	133	22.0	7.8	1.40	23.3	18.1	133
1939	44.6	48.5	31.7	16.8	58.1	8.4	19.4	69.8	3.06	9.0	3.55	7.8	69.8
1940	7.1	22.6	5.5	40.1	91.1	45.2	4.65	21.3	1.09	.79	58.1	11.0	91.1
1941	9.0	3.75	19.4	10.3	1.12	12.9	3.02	1.35	1.60	.00	.06	1.19	19.4
1942	1.51	32.9	20.0	3.18	22.0	7.1	12.9	26.5	6.3	23.3	36.8	40.1	40.1
1943	8.7	29.1	31.7	43.9	6.1	7.1	9.0	.70	2.62	.06	.76	3.36	43.9
1944	18.1	25.2	24.5	38.8	12.9	.49	14.9	11.0	78.8	12	15	14	79
1945	13	39	7.8	14	7.1	3.4	59	28	125	4.72	3.94	52	125

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1925											.25	.25	
1926	0.42	1.32	1.42	.65	.16	.03	.03	.01	.00	.00	.00	.12	.00
1927	0.61	.65	.99	.88	.19	.12	.10	.08	.03	.03	.30	.50	.03
1928	0.91	1.63	1.25	1.12	.94	.75	.16	.07	.67	.67	.70	.67	.07
1929	.67	.67	2.25	1.51	1.12	.63	.58	.37	.48	.94	1.29	1.75	.37
1930	1.43	1.80	1.51	1.09	.56	.28	.10	.00	.00	.00	.08	.24	.00
1931	0.83	.61	.70	1.36	.58	.09	.02	.20	.01	.00	.01	.06	.00
1932	0.50	1.03	.91	1.03	.26	.03	.00	.00	.00	.00	.56	.75	.00
1933	1.63	1.83	1.25	1.06	.37	.01	.00	.03	.00	.00	.01	.01	.00
1934	0.08	.15	.94	1.19	.46	.46	.24	.19	.19	.30	.54	1.29	0.08
1935	1.55	1.55	1.97	2.45	1.22	.12	.09	.05	.19	.19	.58	.80	.05
1936	0.97	2.20	2.30	2.20	.50	.36	.21	.30	.21	.65	.61	.75	.21
1937	3.29	3.23	2.30	2.14	.78	.65	.28	.37	.44	.44	1.16	1.16	.28
1938	1.55	1.43	1.63	.85	.48	.48	.99	.61	.46	.43	.61	1.12	.43
1939	1.51	2.88	2.66	2.02	1.29	.63	.72	.52	.65	.67	.75	.85	.52
1940	1.10	1.29	2.10	1.71	1.06	.97	.54	.20	.19	.16	.43	1.03	.16
1941	1.51	1.25	1.32	1.19	.17	.32	.17	.01	.00	.00	.00	.65	.00
1942	.10	.31	.58	.43	.37	.25	.30	.13	.16	.23	.78	1.93	.10
1943	.30	1.75	1.63	1.97	.80	.32	.14	.00	.00	.00	.06	.14	.00
1944	0.45	.57	1.49	1.94	.45	.03	.00	.01	.00	.59	.75	1.47	.00
1945	1.63	1.49	1.59	.99	.72	.23	.47	.94	.78	1.22	1.19	1.19	.23

Dial Creek near Bahama, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
Jan. 7		0.56	1.05	1.36	0.83	1.68	2.04	1.29	2.23	.26	6.8	22.9
14		.54	1.17	1.33	1.09	1.65	1.42	10.5	5.1	.23	2.21	9.1
21		7.0	1.44	1.17	.88	7.1	1.84	.98	3.81	.16	2.50	21.3
28		1.29	.92	2.34	.78	3.55	1.12	.85	4.72	.19	4.72	3.81
Feb. 4		14.6	.80	2.45	.73	6.7	.82	3.62	2.22	.79	2.28	5.1
11		2.25	.74	5.0	1.70	5.2	.76	1.94	3.15	.27	2.06	7.3
18		2.22	4.72	2.95	2.76	2.75	1.02	1.39	5.9	.44	4.00	24.1
25		20.3	6.2	2.40	4.46	2.07	.91	1.77	4.00	3.12	2.21	4.39
Mar. 4		3.30	1.73	1.57	22.2	1.83	1.18	1.10	2.07	4.91	2.86	2.94
11		2.53	7.8	2.16	18.0	2.41	1.71	12.4	1.84	2.43	2.62	4.33
18		5.6	2.42	4.78	7.2	1.68	.87	1.80	1.87	1.30	7.4	13.0
25		2.08	1.58	2.95	4.52	2.36	4.26	1.92	2.00	3.17	5.2	6.7
Apr. 1		2.13	1.33	1.70	2.84	1.66	3.94	5.1	1.38	7.7	20.0	7.3
8		1.52	1.65	1.27	1.83	3.08	9.3	2.02	2.00	2.72	11.0	32.8
15		4.20	2.44	5.7	2.06	1.72	2.25	2.33	2.25	17.9	5.2	11.1
22		1.93	2.07	2.50	9.6	1.76	1.83	1.25	6.7	8.9	12.0	3.75
29		.88	1.80	27.8	2.71	1.20	2.18	1.98	1.99	1.63	3.81	2.92
May 6		.58	.79	3.21	3.49	.90	1.75	1.52	1.82	1.05	2.05	2.00
13		.41	.12	1.78	3.94	.70	2.00	.79	1.32	.57	2.04	1.47
20		.46	.33	1.21	2.64	6.7	.82	.50	.62	4.52	2.22	1.10
27		.23	.45	5.1	2.16	.85	3.88	.48	.68	.98	3.90	.76
June 3		.23	.56	1.98	2.20	.81	.69	.39	.65	.68	1.14	.49
10		.10	1.74	10.8	2.35	1.32	.58	.12	.18	7.5	.80	1.59
17		.06	.81	1.80	1.80	1.10	.22	.28	.10	1.29	.54	6.5
24		.40	.48	1.29	1.52	1.68	2.65	.20	.19	5.1	.44	1.20
July 1		.16	.16	1.47	5.6	.47	.36	.08	.18	1.02	.18	.72
8		.10	.47	.41	1.97	.41	.16	.03	.00	1.29	.16	.72
15		.19	1.40	.64	3.88	1.12	.07	.00	1.35	.70	3.62	.31
22		.06	2.16	1.54	1.53	4.26	.05	.00	.09	.80	1.63	7.4
29		.56	.30	.30	.76	.96	.43	.00	.42	4.52	.63	1.58
Aug. 5		.06	.56	.42	0.72	.38	1.59	.00	2.69	1.40	.14	4.01
12		.03	.89	1.28	5.2	.19	6.3	.00	.22	2.69	1.03	3.10
19		.21	.17	3.42	1.23	.39	1.35	.00	.09	.30	.39	.78
26		.12	2.38	.59	3.88	.10	1.80	.00	1.18	.85	.65	.46
Sept. 2		.20	.83	.79	2.31	.01	.34	.00	.43	.60	.26	3.03
9		.04	1.49	10.0	.83	.00	.14	.00	.19	5.2	.72	.81
16		.01	.09	1.24	.70	.57	.03	.00	.05	6.2	1.82	2.99
23		.00	.25	20.0	.82	.18	.02	.00	.01	2.75	.35	.36
30		.00	.03	1.80	.73	.05	.01	.00	.00	1.90	1.67	1.89
Oct. 7		.00	.56	1.29	32.9	.00	.01	.95	.00	1.19	.45	3.18
14		.14	2.78	.90	1.63	.00	.01	.01	.00	.75	.32	1.16
21		.01	.60	.74	1.21	.05	.01	5.8	.00	.54	.25	1.52
28		.00	.33	.99	1.43	.03	.01	.23	.00	.50	.28	.76
Nov. 4	.28	.01	.33	.89	2.87	.47	.01	1.44	.00	.62	1.56	.64
11	.23	.02	.33	.78	2.14	.32	.01	3.23	.00	.70	2.07	.96
18	.65	.45	1.08	.70	3.86	.53	.01	.74	.01	.61	3.47	1.86
25	.30	.07	.68	.89	2.94	.39	.02	2.95	.01	.67	1.16	.90
Dec. 2	.29	.60	1.57	.74	4.65	.27	.05	4.90	.01	29.2	1.35	.85
9	.52	.15	.76	.70	3.68	1.02	.47	.89	.12	2.80	1.02	3.19
16	.32	1.63	4.85	.82	1.91	.46	.42	6.1	.09	1.55	6.4	7.8
23	2.21	.56	2.71	.88	2.40	.87	.71	4.20	.18	4.13	1.62	4.07
31	.59	8.8	1.45	.74	2.39	2.76	.61	.99	.16	2.22	.98	5.1
Maximum		20.3	7.8	27.8	32.9	7.1	9.3	12.4	6.7	29.2	20.0	32.8
Minimum		.00	.03	.30	.70	.00	.01	.00	.00	.16	.14	.31

Mean Weekly Discharge in Million Gallons per day

Week Ending	1937	1938	1939	1940	1941	1942	1943	1944	1945		
Jan. 7	16.2	8.8	2.01	1.23	2.87	0.28	3.06	3.81	5.5		
14	4.52	4.13	2.62	2.57	1.74	.19	2.42	.72	4.5		
21	14.9	2.07	3.68	2.64	3.88	.49	7.0	4.33	2.71		
28	7.1	3.21	3.55	1.45	2.10	.30	5.2	.83	1.93		
Feb. 4	9.9	2.24	12.0	1.38	1.59	.50	5.0	.64	1.59		
11	5.8	1.76	17.4	9.4	1.54	.72	9.1	2.73	1.78		
18	4.20	1.72	10.2	3.75	2.09	5.7	2.67	12.2	15.9		
25	6.6	2.52	3.75	5.7	1.37	1.12	2.27	3.75	10.7		
Mar. 4	4.13	2.38	14.8	3.88	1.40	2.07	1.78	2.07	4.52		
11	3.42	4.72	5.3	2.93	5.5	5.6	8.7	5.0	4.01		
18	3.81	3.49	7.8	6.7	2.05	1.34	3.15	6.3	2.33		
25	3.36	2.13	3.29	2.53	1.89	1.58	4.52	9.6	2.21		
Apr. 1	2.53	1.72	10.5	2.60	6.0	2.28	5.7	7.1	1.73		
8	12.8	2.42	4.97	2.11	4.65	.96	2.25	2.80	1.30		
15	4.00	5.1	2.78	5.1	2.76	1.38	3.15	10.7	1.10		
22	3.09	1.55	2.87	9.2	1.55	.68	11.0	4.33	4.91		
29	15.5	1.24	6.3	3.36	1.78	.48	2.83	3.88	2.60		
May 6	3.81	.79	14.0	1.92	1.05	1.25	1.76	1.66	1.53		
13	2.13	.65	2.93	1.87	.78	1.11	1.68	3.42	1.10		
20	2.13	1.18	2.03	1.34	.56	4.97	1.26	.88	2.07		
27	1.16	.83	1.60	19.8	.32	4.65	1.93	1.29	1.83		
June 3	1.01	1.14	3.36	4.26	4.33	.55	.92	.47	1.25		
10	4.33	2.54	1.86	1.53	.59	1.29	1.80	.36	.72		
17	1.67	2.14	1.93	1.83	3.36	.78	.95	.33	.68		
24	1.29	18.5	2.11	8.7	.58	1.38	.59	.16	1.10		
July 1	1.02	7.6	1.38	1.85	.41	.54	.37	.05	.34		
8	2.00	4.01	5.6	1.04	.63	6.3	2.86	.01	2.52		
15	.56	3.42	1.57	1.85	1.13	3.49	1.21	2.30	9.9		
22	.49	2.15	2.91	.80	.55	.67	.43	.48	19.9		
29	.79	35.5	3.42	.92	.59	.88	.21	.15	9.1		
Aug. 5	2.43	7.0	1.30	.45	.41	.63	.10	1.87	1.62		
12	1.22	5.9	.98	.30	.25	5.6	.03	.30	2.31		
19	1.71	1.67	15.6	7.3	.02	6.5	.01	.06	1.36		
26	7.2	.96	2.20	3.04	.34	2.60	.00	.03	7.5		
Sept. 2	3.62	.77	13.3	1.27	.17	.67	.25	.05	1.21		
9	4.91	.79	1.77	.75	.35	1.63	.43	.00	1.59		
16	1.07	.56	1.05	.59	.02	.50	.02	.19	11.6		
23	.63	2.11	.76	.36	.00	.23	.21	6.0	32.4		
30	.48	.80	.70	.21	.01	.82	.05	15.1	2.69		
Oct. 7	3.21	.70	2.45	.20	.00	.34	.01	2.69	2.64		
14	1.61	.52	.83	.24	.00	1.40	.00	.87	1.74		
21	7.0	.47	.70	.19	.00	6.1	.00	2.95	1.41		
28	2.28	.79	.74	.23	.00	2.89	.03	1.38	1.50		
Nov. 4	1.43	.72	1.11	1.30	.00	1.40	.07	.90	1.36		
11	1.20	.82	1.12	.45	.00	.97	.25	.31	1.26		
18	3.36	.64	.78	13.8	.00	.82	.14	.39	1.47		
25	1.54	5.5	1.72	1.57	.03	.70	.16	.94	1.83		
Dec. 2	1.88	1.47	.97	1.56	.06	2.84	.16	6.1	1.33		
9	1.50	4.26	.96	1.16	.22	10.1	.23	4.33	6.3		
16	1.32	1.85	.93	1.52	.26	3.14	.18	3.49	2.62		
23	1.37	1.25	1.00	2.11	.17	3.08	.18	1.72	2.56		
31	2.07	5.4	2.72	4.52	.39	8.0	1.14	1.87	18.1		
Maximum	16.2	35.5	17.4	19.8	6.0	10.1	11.0	15.1	32.4		
Minimum	.48	.47	.70	.19	.00	.19	.00	.00	.34		

Eno River at Hillsboro, N. C.

Location.- Water-stage recorder and sharp-crested rectangular weir and masonry control, Lat. 36°04'20", long. 79°06'30", 1,000 feet downstream from U. S. Highway 70 at Hillsboro, Orange County, and 2 miles downstream from Sevenmile Creek.

Drainage area.- 66.5 square miles.

Records available.- November 1927 to date.

Average discharge.- 13 years, 45.3 million gallons per day

Extremes.- Maximum discharge, 7,110 million gallons per day Sept 16, 1930 (gage height, 20.01 feet, from graph based on staff-gage readings); minimum, 0.16 million gallons per day Oct. 20-27, 1941 (gage height 0.74 foot).

Remarks.- Part of 0.16 million gallons per day diverted for Hillsboro water supply is returned above station as sewage. Operation of cotton mill one mile upstream causes considerable daily regulation. Automatic recorder installed June 29, 1937; staff gage prior to this date.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1927											13.3	114	
1928	38.4	64.5	51.7	185	321	39.4	10.7	57.9	302	20.5	14.7	15.4	68.5
1929								32.2	10.7	117	50.5	44.6	
1930				26.1	18.0	13.1	54.4	5.06	2.91	3.86	14.7	20.4	
1931	31.8	14.0	31.8	77.5	107	14.5	39.4	95.0	8.79	3.57	2.76	8.66	36.5
1932	81.4	43.3	137	31.9	14.6	19.1	6.30	4.69	2.91	23.5	75.6	97.5	45.0
1933	60.4	69.8	29.0	38.8	17.3	8.66	7.69	23.1	6.19	1.76	1.67	2.88	22.0
1934	4.72	24.9	58.9	93.0	41.0	69.1	18.2	21.4	88.5	14.6	30.4	92.4	46.4
1935	59.6	41.8	63.5	121	40.2	12.9	13.8	4.14	15.3	6.34	27.8	27.5	36.0
1936	211	112	151	171	18.5	24.9	28.2	30.4	9.85	12.7	9.37	79.5	71.7
1937	176	75.6	53.5	91.1	30.3	34.6	22.4	58.2	47.4	28.3	21.0	17.1	54.6
1938	55.9	28.8	38.2	41.5	13.0	100	232	31.5	11.4	8.79	30.7	48.3	53.6
1939	50.5	143	117	66.5	62.1	54.2	57.0	165	22.1	12.6	12.1	16.5	64.6
1940	22.5	103	50.8	48.7	38.9	36.0	12.5	36.2	6.46	3.36	65.9	22.5	36.9
1941	34.2	29.1	52.0	42.6	11.2	15.1	12.0	3.21	1.76	.44	.53	2.35	17.0
1942	3.33	30.6	49.1	12.1	46.3	20.3	14.6	29.1	14.1	30.0	42.2	72.4	30.4
1943	80.8	65.9	71.1	56.5	28.7	28.6	11.8	3.85	5.47	2.91	3.87	7.36	30.3
1944	38.2	73.6	107	78.2	38.5	7.49	69.1	9.56	70.4	46.8	41.3	36.9	51.4
1945	40.4	92.4	41.4	33.0	25.5	11.5	76.9	32.6	221	31.0	16.7	107	59.6

Eno River at Hillsboro, N. C.
Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1927											17	562	
1928	139	363	364	2530	81	334	43	685	3310	32	21	24	3310
1929								334	18	2240	182	203	
1930				67	78	114	833	12	6.1	10	52	78	
1931	145	21	203	442	1450	87	704	1410	17	4.7	3.2	15	1450
1932	632	122	1180	154	21	52	14	16	7.0	336	652	383	1180
1933	218	267	59	114	37	30	68	299	63	3.2	2.3	5.8	299
1934	9.0	320	285	930	195	336	114	154	736	43	307	1540	1540
1935	239	89	275	665	171	23	55	7.1	229	39	194	215	665
1936	1360	487	1290	1090	30	137	258	601	26	39	26	337	1360
1937	885	258	118	406	60	198	130	187	423	129	101	37	885
1938	457	107	220	329	34	782	1630	87	33	18	418	345	1630
1939	186	724	477	205	637	624	504	975	52	39	23	81	975
1940	98	704	259	151	352	402	66	377	12	6.5	685	51	704
1941	125	155	355	121	19	89	52	10	7.8	1.3	.78	5.4	355
1942	7.8	491	497	23	652	152	52	226	79	238	652	574	652
1943	428	462	334	448	269	148	34	15	32	4.4	16	44	462
1944	234	453	344	626	275	12	1380	52	775	433	420	102	1380
1945	136	373	101	178	121	65	711	285	2950	59	30	775	2950

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1927											12	12	
1928	18	28	19	18	19	9.0	5.2	3.4	19	14	12	11	3.4
1929								9.7	7.8	16	18	27	
1930				16	9.7	7.0	3.7	2.5	1.7	2.5	3.9	6.7	
1931	14	11	11	22	15	7.0	5.8	9.7	4.5	2.7	2.1	2.1	2.1
1932	13	22	19	18	8.7	5.6	2.5	1.6	.78	.90	12	14	.78
1933	25	28	19	19	8.7	4.5	2.5	3.2	1.6	.97	1.4	1.4	.97
1934	3.4	4.5	14	17	9.4	12	5.8	7.2	9.0	9.0	12	20	3.4
1935	25	23	26	33	23	5.9	5.7	2.1	2.6	3.7	6.5	7.8	2.1
1936	10	27	27	30	9.0	7.8	6.2	7.1	6.5	5.8	5.2	9.0	5.2
1937	47	44	34	28	17	10	9.0	10	12	11	12	12	9.0
1938	19	21	19	15	8.4	9.7	23	10	7.8	6.5	7.1	16	6.5
1939	22	37	32	29	18	13	12	12	12	7.8	9.7	9.0	7.8
1940	12	17	28	21	12	9.7	5.0	4.1	3.3	2.6	4.7	12	2.6
1941	16	17	17	17	5.9	6.1	4.6	1.7	.26	.19	.32	.45	.19
1942	2.1	3.5	7.1	7.1	6.0	6.2	4.8	3.3	3.3	4.6	9.7	24	2.1
1943	25	25	21	25	12	9.0	5.7	1.6	2.0	2.2	2.7	2.6	1.6
1944	9.0	7.8	21	27	11	4.0	3.2	5.2	2.6	9.7	12	21	2.6
1945	20	18	21	16	13	5.3	4.7	10	9.7	15	14	15	4.7

Mean Weekly Discharge in Million Gallons per day

Week Ending	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Jan. 7		35			50	61	40	6.5	79	387	282	101	31
14		27			28	238	127	4.8	57	175	74	63	43
21		25			39	25	47	4.2	36	310	231	28	54
28		50			18	16	41	3.9	79	48	103	43	50
Feb. 4		65			13	37	32	11	29	79	152	30	97
11		98			12	67	58	5.9	30	122	63	24	224
18		79			16	38	121	7.8	66	205	54	22	150
25		42			16	45	65	8.4	38	51	103	39	53
Mar. 4		28			16	22	34	121	34	34	72	28	218
11		45			28	505	30	39	36	62	60	63	97
18		93			13	26	28	17	91	320	46	48	116
25		50			32	25	36	50	46	151	48	26	45
Apr. 1		30			79	63	21	113	181	129	38	21	152
8		21		42	166	37	30	40	143	478	121	42	104
15		139		25	38	30	39	244	80	154	53	87	47
22		50		22	56	26	57	81	152	46	41	25	59
29		563		18	47	19	34	23	49	39	156	19	51
May 6		58		16	36	20	23	16	29	28	180	13	180
13		34		16	95	16	21	12	30	23	32	10	36
20		28		32	19	14	13	61	33	17	32	14	25
27		24		12	314	12	12	36	75	13	20	16	30
June 3		21		10	21	9.0	19	85	24	9.0	30	17	124
10		116		9.7	14	6.5	9.0	163	18	12	60	28	48
17		21		8.4	12	33	8.4	41	12	17	32	22	34
24		12		27	21	25	5.4	5.5	9.0	52	27	229	26
July 1		12		7.8	7.8	15	6.4	15	6.5	24	12	147	15
8		9.0		13	21	7.8	4.5	14	10	9.7	47	81	100
15		21	105	37	15	5.7	18	10	16	7.1	15	220	36
22		7.8	33	172	18	4.7	3.7	7.1	18	67	13	58	29
29		7.1	19	14	116	4.6	3.9	31	14	19	16	645	65
Aug. 5		4.5	13	8.4	33	11	70	25	6.5	34	50	69	36
12		59	74	6.5	31	7.8	12	26	5.5	12	55	41	34
19		163	14	4.4	247	2.9	5.7	9.0	3.0	8.4	56	22	389
26		20	34	3.5	97	1.7	5.7	12	3.9	7.8	52	14	72
Sept. 2		41	16	2.6	19	1.9	14	42	2.8	96	75	11	238
9		546	9.7	2.8	13	4.8	16	105	43	7.1	122	13	34
16		26	10	3.2	8.4	29	3.7	183	12	14	29	8.4	19
23		659	11	3.0	6.5	3.1	2.8	65	4.9	7.8	16	16	15
30		35	11	2.8	5.1	.90	1.7	22	4.6	10	13	9.0	12
Oct. 7		27	433	2.6	4.2	5.4	2.1	23	4.3	12	52	10	20
14		20	25	2.5	3.6	1.9	1.2	16	3.9	10	29	7.8	12
21		17	19	4.8	3.3	82	1.4	12	3.9	22	23	7.1	10
28		19	32	4.3	2.8	11	2.1	10	4.1	9.0	16	10	9.0
Nov. 4		17	43	7.3	3.6	41	1.9	11	17	5.6	14	7.8	12
11		15	43	9.7	2.6	79	1.7	12	26	7.1	12	11	11
18		14	61	24	2.8	19	1.7	13	63	14	41	7.8	9.7
25		17	39	17	2.9	26	1.9	12	13	9.7	17	92	16
Dec. 2	26	15	53	12	2.5	168	1.4	326	16	10	16	21	11
9	280	15	80	33	9.7	16	2.4	40	9.7	66	14	65	10
16	109	16	31	9.0	9.0	150	2.6	23	77	176	14	32	9.7
23	61	17	31	12	8.4	79	3.9	72	19	57	14	18	10
31	39	13	37	29	9.0	160	3.0	29	11	45	26	83	34
Maximum		659			314	505	127	326	181	478	282	645	389
Minimum		4.5			2.5	.90	1.2	3.9	2.8	5.6	12	7.1	9.0

Eno River at Hillsboro, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1938	1939	1940	1941	1942	1943	1944	1945	
Jan. 7	101	31	14	37	3.2	47	56	60	
14	63	43	26	20	2.5	35	12	52	
21	28	54	36	57	3.9	110	83	33	
28	43	50	17	28	3.7	108	14	25	
Feb. 4	30	97	19	21	4.1	95	10	19	
11	24	224	209	18	14	142	43	23	
18	22	150	52	56	85	42	180	178	
25	39	53	130	23	17	30	58	132	
Mar. 4	28	218	48	20	32	24	27	60	
11	63	97	41	79	107	114	83	64	
18	48	116	83	28	21	45	120	33	
25	26	45	35	25	30	72	141	31	
Apr. 1	21	152	41	105	36	77	129	24	
8	42	104	36	70	15	32	43	18	
15	87	47	78	36	16	37	165	17	
22	25	59	43	21	9.7	127	72	57	
29	19	51	41	36	7.8	36	41	43	
May 6	13	180	22	16	20	23	59	23	
13	10	36	19	14	12	22	70	17	
20	14	25	14	10	141	17	20	51	
27	16	30	32	7.8	27	57	17	18	
June 3	17	124	106	21	9.0	17	12	13	
10	28	48	30	16	37	48	9.7	11	
17	22	34	19	18	29	45	8.4	8.4	
24	229	26	78	7.8	12	15	6.0	19	
July 1	147	15	12	7.8	7.1	9.7	5.6	6.2	
8	81	100	10	12	19	13	4.3	7.8	
15	220	36	25	21	24	19	218	58	
22	58	29	10	12	12	9.0	61	243	
29	645	65	6.5	5.9	7.1	7.8	17	25	
Aug. 5	69	36	4.8	4.1	13	5.2	21	14	
12	41	34	5.4	2.1	57	3.1	9.0	16	
19	22	389	123	2.9	33	2.4	6.5	86	
26	14	72	17	4.9	22	1.7	6.4	25	
Sept. 2	11	238	14	2.1	7.1	7.8	5.7	12	
9	13	34	8.4	4.1	25	9.0	3.5	19	
16	8.4	19	7.8	1.6	7.8	4.5	11	127	
23	16	15	5.0	.84	4.4	5.2	127	769	
30	9.0	12	3.7	.56	22	3.4	159	30	
Oct. 7	10	20	3.2	.65	7.1	2.6	50	32	
14	7.8	12	3.3	.35	19	2.6	13	21	
21	7.1	10	3.2	.24	60	2.7	105	17	
28	10	9.0	3.5	.35	39	3.6	32	21	
Nov. 4	7.8	12	10	.78	17	3.6	16	16	
11	11	11	5.1	.65	12	6.3	14	15	
18	7.8	9.7	234	.47	10	3.1	14	16	
25	92	16	20	.43	125	2.8	14	20	
Dec. 2	21	11	17	.46	40	3.0	146	17	
9	65	10	14	1.8	81	3.6	47	105	
16	32	9.7	18	2.2	42	3.2	44	35	
23	18	10	26	1.9	44	2.6	25	34	
31	83	34	33	3.8	120	19	25	259	
Maximum	645	389	234	105	141	142	218	769	
Minimum	7.1	9.0	3.2	.24	2.5	1.7	3.5	6.2	

Flat River at Bahama, N. C.

Location.— Water-stage recorder and rectangular weirs in masonry control, lat. 38°11' 25", long. 78°53'00", at head of Lake Michie, 1 $\frac{3}{4}$ miles upstream from county highway bridge, 1 $\frac{1}{2}$ miles upstream from Dial Creek, and 1 $\frac{1}{2}$ miles north of Bahama, Durham County. Datum of gage is 255.05 feet above mean sea level.

Drainage area.— 150 square miles.

Records available.— July 1925 to date.

Average discharge.— 20 years, 96.4 million gallons per day.

Extremes.— 1925-45: Maximum discharge during year, 10,400 million gallons per day Sept. 18, 1945, computed on basis of records for stations on nearby streams; minimum, 0.24 million gallons per day Sept. 26, 27, 1932 (gage height, 0.23 foot).

Remarks.— Some regulation at low flow by small mill 5 miles above station. Automatic recorder installed October 12, 1925; staff gage July 16, 1925 to October 11, 1925.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1925							3.36	2.97	.90	3.15	7.17	15.4	
1926	103	233	91.1	82.0	16.9	8.40	28.3	24.9	29.7	1.81	3.40	114	60.2
1927	39.8	126	138	60.6	14.3	19.1	64.3	48.1	46.8	40.1	33.7	248	73.0
1928	51.0	140	136	290	80.8	56.1	13.2	56.3	246	26.3	15.7	14.7	93.0
1929	16.7	240	309	170	73.0	72.4	92.4	101	26.5	327	110	95.6	136
1930	115	157.0	53.9	55.7	65.9	26.7	99.5	10.2	6.65	1.74	4.52	34.1	52.1
1931	60.9	28.7	78.8	202	211	27.9	27.9	208	13.0	7.17	4.72	21.6	74.0
1932	202	104	237	78.8	24.4	25.8	6.05	3.46	.49	66.5	132	220	91.7
1933	135	165	64.6	158	101	30.8	8.66	15.0	9.56	.90	.46	1.17	56.8
1934	2.77	51.6	175	282	109	132	58.3	38.2	311	22.5	145	188	126
1935	154	110	209	351	66.5	17.5	27.5	12.5	54.9	12.7	63.2	67.2	95.0
1936	492	318	311	395	34.6	37.4	64.0	37.3	14.1	27.6	12.1	109	154
1937	470	164	98.2	311	58.1	62.1	49.4	127	52.7	67.8	42.3	29.6	127
1938	130	51.3	82.7	81.4	24.8	356	490	65.2	27.6	14.4	80.1	114	127
1939	125	275	266	136	133	48.4	112	278	37.1	20.4	25.6	34.0	123
1940	49.4	253	110	91.1	158	100	23.6	187	19.7	7.36	156	73.0	101
1941	97.5	51.6	110	87.2	18.2	18.7	20.5	5.83	9.30	.80	.64	2.69	35.2
1942	4.33	42.6	96.3	20.1	139	26.9	32.2	105	41.1	182	114	183	82.7
1943	177	207	171	126	40.9	25.3	32.4	3.34	5.39	1.54	2.51	68.20	65.9
1944	76.9	152	245	245	65.9	17.6	29.1	27.8	308	99.4	96.9	107	122
1945	107	266	87.2	66.5	46.4	36.2	176	87.2	418	36.8	27.8	231	131

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum
1925							7.8	5.9	2.1	21	32	94	
1926	1190	866	326	762	41	30	323	184	409	4.2	11	1450	14
1927	173	623	749	200	39	63	438	202	788	284	424	1150	11
1928	231	736	1240	2960	390	659	29	579	2940	84	21	20	29
1929	28	3310	3020	2040	209	402	840	1060	68	6400	439	611	64
1930	421	808	145	255	698	182	1800	61	40	3.0	7.8	254	18
1931	314	56	470	1550	2230	99	339	1600	47	30	22	85	22
1932	1890	332	2620	359	47	342	25	12	1.1	872	924	956	26
1933	534	685	189	1120	1110	238	32	70	89	2.5	.59	3.5	11
1934	4.5	678	1110	2640	685	550	698	343	3200	58	2650	2780	32
1935	859	449	1200	2120	399	30	90	42	911	134	483	577	21
1936	3220	2480	2620	2710	59	202	885	599	78	313	35	624	32
1937	2540	457	195	2810	136	204	311	749	531	303	302	68	28
1938	1200	162	665	808	103	3400	58.0	284	131	36	1350	801	58
1939	522	1230	1170	691	1520	293	975	1810	117	103	60	265	18
1940	289	1580	592	386	1320	1210	64	1100	56	13	1620	543	16
1941	395	240	576	380	30	64	52	16	68	1.2	.73	5.0	5
1942	7.1	635	982	48	1530	149	163	872	333	2530	1870	1610	25
1943	1130	1790	1000	1110	239	120	361	12	17	3.5	4.6	55	17
1944	519	833	969	3290	553	37	479	273	3370	717	1160	749	38
1945	419	1540	272	404	129	380	1160	788	6260	112	55	1680	62

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum
1925							.97	.90	.39	1.0	2.8	3.6	
1926	7.1	36	39	27	7.1	3.6	5.2	4.3	2.5	1.3	1.2	3.0	1.3
1927	20	21	30	28	6.3	4.0	4.3	7.8	6.5	6.2	9.0	16	4.0
1928	27	52	36	35	32	16	4.0	3.9	11	15	12	12	3.9
1929	12	11	75	42	28	19	14	12	16	26	30	45	11
1930	35	47	36	24	17	12	5.2	3.7	2.8	.97	1.4	3.2	0.9
1931	23	15	22	41	30	9.5	6.5	17	4.8	3.4	1.9	3.0	1.9
1932	23	43	35	34	13	9.1	1.3	1.0	.24	.65	21	25	0.2
1933	57	59	37	34	19	7.0	4.5	5.6	1.1	.30	.37	.43	0.3
1934	2.0	4.3	28	32	14	26	11	6.5	11	12	12	38	2.0
1935	48	45	55	74	29	6.7	7.9	4.5	4.5	3.6	12	16	3.6
1936	28	51	50	61	14	12	5.9	7.4	5.7	7.2	6.5	12	5.7
1937	101	82	56	45	23	21	14	19	9.0	11	17	19	9.0
1938	34	32	31	21	12	15	36	11	10	11	12	29	10
1939	41	80	67	52	27	16	17	14	17	9.7	15	14	9.7
1940	22	31	57	36	23	25	14	7.8	7.8	2.0	8.4	23	2.0
1941	40	36	34	31	9.0	6.1	7.1	3.0	1.4	.54	.59	.65	0.5
1942	3.3	5.4	11	9.7	9.0	9.0	8.4	9.0	6.3	9.7	25	58	3.3
1943	48	49	44	47	20	9.0	5.2	.99	1.6	.75	.82	2.10	0.7
1944	14	12	44	57	17	6.5	2.6	3.9	1.7	23	11	42	1.7
1945	41	36	39	26	23	13	12	23	21	24	22	20	12

Flat River at Bahama, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
Jan. 7		14	43	51	14	46	94	67	94	3.2	242
14		19	26	45	21	47	51	643	233	2.6	84
21		269	64	35	17	250	80	50	110	2.5	85
28		51	29	78	15	130	34	43	130	2.9	242
Feb. 4		402	30	98	14	255	22	213	67	10	64
11		94	23	240	39	224	21	95	128	9.0	63
18		131	163	128	78	102	35	101	282	5.0	212
25		329	264	97	147	63	38	87	170	7.1	90
Mar. 4		110	79	50	885	47	44	43	81	366	81
11		78	391	92	634	71	63	641	62	120	102
18		179	101	297	182	43	29	70	50	39	267
25		61	48	132	254	61	105	73	101	131	152
Apr. 1		64	34	64	115	44	196	295	41	324	614
8		41	41	39	60	108	530	83	65	88	422
15		185	85	277	67	48	94	105	114	801	211
22		70	54	104	433	44	67	48	400	239	483
29		36	69	795	137	30	89	48	81	48	132
May 6		28	28	125	105	24	125	37	94	30	67
13		19	16	68	76	20	214	26	226	21	57
20		17	10	41	43	201	39	21	50	147	50
27		9.0	8.4	120	65	36	539	16	50	98	115
June 3		9.0	10	43	63	23	39	18	60	243	30
10		9.7	30	163	94	26	28	10	19	276	25
17		5.9	27	30	52	19	30	21	51	51	17
24		5.2	14	18	30	48	38	15	25	152	14
July 1		12	6.5	19	125	13	12	63	16	40	9.0
8		17	26	12	79	15	16	13	7.8	50	9.0
15		23	139	16	265	9.7	12	5.2	12	17	26
22	4.9	19	100	17	31	379	13	3.0	6.5	16	49
29	2.5	61	16	9.0	25	31	76	1.6	8.4	116	30
Aug. 5	1.9	14	25	5.0	16	23	121	2.8	21	67	13
12	2.0	6.1	27	31	89	13	339	7.1	14	36	25
19	4.1	7.1	39	188	67	6.5	289	3.4	7.8	10	9.0
26	4.1	82	100	19	214	5.4	152	1.7	19	74	9.7
Sept. 2	1.6	87	151	11	78	3.9	32	1.1	8.4	37	5.4
9	1.8	31	34	315	22	3.0	16	.63	26	866	155
16	.90	5.9	17	31	28	14	10	.47	7.8	295	52
23	.52	6.5	16	659	30	6.5	7.8	.32	3.7	117	9.0
30	.45	3.6	6.5	49	23	4.0	15	.42	1.6	53	18
Oct. 7	2.4	1.9	39	43	1320	2.6	5.4	6.2	1.0	37	10
14	1.4	2.1	96	23	51	1.7	5.0	12	.84	26	6.5
21	1.5	1.7	25	21	32	1.6	14	250	1.5	17	5.2
28	6.0	1.6	13	21	36	1.0	5.0	20	.43	14	4.1
Nov. 4	4.8	1.3	10	18	91	1.9	5.0	65	.39	14	39
11	3.6	1.3	12	16	77	4.7	4.6	162	.50	17	71
18	14	2.0	77	14	115	4.1	7.1	30	.46	16	138
25	6.5	4.6	38	17	86	6.5	3.6	111	.45	19	29
Dec. 2	5.4	8.4	72	14	144	4.1	2.6	222	.45	1010	32
9	14	4.5	599	15	181	25	11	32	.71	107	20
16	6.5	36	242	15	56	11	26	227	.71	47	191
23	26	22	143	16	66	14	21	152	1.4	157	46
31	18	384	49	14	81	88	31	479	1.9	62	28
Maximum		402	599	795	1320	379	539	643	400	1010	614
Minimum		1.3	6.5	5.0	14	1.0	2.6	.32	.39	2.5	4.1

Flat River at Bahama, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	
Jan. 7	956	724	251	70	28	107	3.7	103	126	171	
14	335	157	129	94	55	49	3.4	72	20	142	
21	756	775	53	147	91	169	3.8	194	163	83	
28	101	196	118	118	32	83	5.9	267	25	56	
Feb. 4	171	357	61	229	37	50	5.6	240	16	39	
11	251	191	41	385	521	42	18	519	63	47	
18	749	116	38	315	133	83	117	122	360	607	
25	128	180	66	109	318	40	26	68	150	335	
Mar. 4	74	118	59	446	118	36	70	50	72	147	
11	118	93	170	172	93	198	213	318	209	132	
18	685	103	87	353	180	63	37	116	289	65	
25	255	99	46	102	70	55	42	165	326	58	
Apr. 1	297	69	34	315	70	174	75	143	250	43	
8	1110	398	83	249	56	176	25	58	81	32	
15	375	105	194	93	117	74	27	75	659	28	
22	100	71	38	94	121	41	16	313	147	138	
29	79	717	26	100	79	56	11	75	131	76	
May 6	54	120	19	430	41	28	125	43	49	39	
13	41	59	15	68	34	23	26	37	107	28	
20	34	61	26	43	26	16	337	31	27	67	
27	22	32	39	43	439	12	116	59	103	42	
June 3	14	31	23	42	209	14	19	27	24	44	
10	40	125	109	55	43	16	34	43	16	16	
17	70	59	130	39	68	33	48	27	21	38	
24	27	46	1040	78	247	14	16	18	21	79	
July 1	21	30	249	26	29	11	11	12	9.0	15	
8	14	98	128	189	21	20	30	28	4.5	25	
15	9.0	24	176	43	32	23	44	89	77	57	
22	182	23	121	75	17	26	21	17	32	378	
29	31	19	1690	150	22	16	37	7.1	11	306	
Aug. 5	68	174	177	48	21	9.7	17	4.7	63	55	
12	23	94	76	30	11	6.3	147	3.3	43	85	
19	10	160	43	646	592	4.7	209	2.3	7.1	74	
26	10	116	25	123	161	5.2	78	1.4	9.0	162	
Sept. 2	102	89	20	443	63	6.5	26	7.1	7.1	29	
9	8.4	145	33	61	23	27	53	5.7	2.9	33	
16	29	32	15	29	30	7.8	19	6.5	5.7	189	
23	6.3	16	47	21	14	2.8	9.7	3.7	634	1510	
30	14	11	18	18	9.0	1.5	88	4.8	678	58	
Oct. 7	61	13	16	37	8.4	1.1	17	2.8	131	54	
14	17	75	12	19	7.8	.78	92	1.7	36	39	
21	30	52	11	16	7.1	.71	540	1.0	193	28	
28	10	32	19	12	6.5	.62	132	.84	66	31	
Nov. 4	7.1	25	13	20	27	.71	52	.84	32	25	
11	7.8	21	17	29	10	.65	34	1.5	27	25	
18	19	96	13	16	558	.59	30	4.1	26	27	
25	12	31	272	36	46	.63	337	3.2	27	34	
Dec. 2	13	29	45	19.0	39	.65	118	2.3	365	26	
9	50	25	169	17	27	1.6	198	2.4	190	203	
16	175	22	82	16	34	2.8	114	2.8	118	57	
23	125	22	35	18	48	3.0	101	2.6	56	58	
31	110	48	184	83	178	3.8	301	25	54	612	
Maximum	1110	775	1690	646	592	198	540	519	678	1510	
Minimum	6.3	11	11	12	6.5	.59	3.4	.84	2.9	15	

Flat River at Dam near Bahama, N. C.

Location.- Water-stage recorder and masonry control, lat. 36°09'05", long. 78°50'55", just downstream from Durham municipal dam at old Tilley mill site, 3 miles southeast of Bahama, Durham County, and 4 miles upstream from confluence with Eno River.

Drainage area.- 171 square miles.

Records available.- August 1927 to date

Average discharge.- 18 years, 104 million gallons per day

Extremes.- 1927-45: Maximum discharge, 12,010 million gallons per day July 26, 1938 (gage height, 19.50 feet), by computation of flow over Durham municipal dam; no flow Sept. 3-14, 1938.

Remarks.- Considerable regulation by Lake Michie (usable capacity, 13,810 acre-feet) just above station where a daily average of 7.0 million gallons per day was diverted for Durham water supply about 50 percent of which was returned to Mouse River as sewage. Long diurnal fluctuation caused by power plant at Durham municipal dam. Automatic recorder installed August 13, 1929; staff gage prior to this date.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
*1927								72.4	62.5	60.0	15.1	219	
1928	65.9	163	137	260	111	81.4	16.5	43.5	265	38.6	28.3	14.7	102
1929	11.5	154	342	193	95.0	62.2	119	91.7	43.1	315	107	123	138
1930	106	185	67.8	65.9	55.2	41.3	84.0	35.9	10.3	2.76	1.45	27.8	56.2
1931	36.3	38.9	40.4	220	186	62.1	28.4	206	26.9	16.9	3.64	31.1	74.9
1932	175	130	192	128	36.8	29.4	9.37	3.16	1.67	18.1	116	225	88.5
1933	171	167	85.3	143	91.7	42.4	8.20	5.62	6.65	3.15	2.33	2.43	59.9
1934	77.5	5.94	151	311	81.4	160	48.2	50.2	297	49.1	956	247	125
1935	159	140	191	401	95.6	42.6	22.9	3.48	42.0	26.0	59.6	75.6	104
1936	480	372	328	440	61.3	35.1	36.2	65.2	37.3	26.4	18.7	89.1	165
1937	490	211	140	289	103	516	41.2	127	92.4	55.7	55.6	56.4	143
1938	148	62.0	84.6	73.6	25.5	317	514	123	13.8	35.5	52.7	99.5	130
1939	127	301	273	164	149	45.2	106	311	77.5	27.6	17.2	28.6	135
1940	74.9	222	130	87.9	142	129	34.4	163	42.1	11.6	140	52.9	102
1941	112	59.9	91.7	108	27.7	16.7	18.2	2.14	2.73	1.94	2.38	8.85	37.6
1942	1.48	19.3	64.0	27.8	132	21.8	31.3	115	37.9	187	101	183	77.5
1943	191	229	167	136	44.9	17.3	34.9	2.02	.194	.019	.019	.284	67.8
1944	69.1	142	266	282	58.1	13.7	21.1	153	302	133	82.7	140	127
1945	114	282	109	62.5	40.3	33.4	228	97.5	461	30.7	20.1	256	143

* Discharge August 20 - 31

Flat River at Dam near Bahama, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1927								123	129	145	79	585	
1928	170	206	392	3160	220	243	28	167	2020	56	42	34	3160
1929	39	2660	2590	2020	173	172	1030	281	101	5980	211	285	5980
1930	160	808	142	123	136	96	541	48	23	20	9.7	119	808
1931	46	48	54	1440	659	181	56	846	45	68	14	54	1440
1932	1050	167	1450	304	50	60	43	22	19	52	187	943	1450
1933	221	330	182	808	181	55	22	25	25	16	12	21	808
1934	162	56	266	2360	194	391	199	198	3500	56	1550	2380	3500
1935	196	192	1130	1800	183	70	63	16	79	61	142	162	1800
1936	2060	2310	1920	2330	89	68	191	172	76	57	26	180	2330
1937	2180	464	209	2550	214	81	70	260	189	141	67	70	2550
1938	193	150	181	139	60	3360	6290	248	37	70	176	174	6290
1939	198	1410	846	455	1120	71	220	1910	207	59	21	36	1910
1940	108	678	210	189	1560	711	95	1100	156	20	1550	176	1560
1941	185	95	193	194	60	25	25	5.6	13	2.1	12	23	194
1942	1.7	72	175	120	762	74	80	641	90	1940	788	788	1940
1943	685	1570	749	924	110	41	149	5.0	.2	.2	.2	.3	1570
1944	189	1150	1020	2760	148	28	93	93	3930	956	749	377	3930
1945	366	1250	223	262	139	220	1310	574	6520	57	28	1890	6520

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
*1927								47	30	1.9	.5	.8	
1928	36	46	34	59	43	28	.6	.5	3.1	26	17	.3	.5
1929	.3	18	116	19	25	19	30	28	17	23	26	23	0.3
1930	80	106	36	27	29	28	1.8	1.8	.5	.5	.5	.5	0.5
1931	25	32	27	124	23	23	.6	6.5	.6	.7	2.1	2.1	0.6
1932	36	41	39	37	22	1.0	.7	.5	.5	1.0	37	74	0.5
1933	132	68	26	32	26	9.0	2.1	2.5	2.5	2.4	.63	.13	0.13
1934	0.42	.63	31	63	36	42	13	24	32	36	14	79	0.42
1935	61	72	52	107	30	2.7	2.6	1.9	2.6	1.6	17	36	1.6
1936	59	116	92	112	36	1.0	2.5	26	3.2	16	2.4	2.4	1.0
1937	180	109	57	36	47	17	2.1	36	38	2.4	44	37	2.1
1938	43	42	43	46	17	21	137	54	.0	21	3.7	37	.0
1939	70	156	108	54	52	17	18	29	25	16	16	18	16
1940	20	65	80	39	34	40	4.4	2.7	12	1.2	1.2	13	1.2
1941	53	22	22	41	4.2	1.7	1.6	1.6	1.7	1.7	1.7	1.4	1.4
1942	1.4	1.4	11	2.1	2.6	1.9	2.6	12	5.1	3.9	3.9	68	1.4
1943	26	70	56	17	5.3	5.0	4.6	.2	.2	.2	.2	.2	.2
1944	0.3	.5	35	41	26	2.0	1.4	1.3	2.2	18	4.4	17	0.3
1945	42	26	20	4.3	4.6	4.6	28	28	21	6.5	6.5	12	4.3

Mean Weekly Discharge in Million Gallons per day

Week Ending	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
Jan. 7		125	0.32	115	34	43	167	74	160	736
14		50	3.0	40	37	401	179	76	167	397
21		52	7.1	121	36	149	183	78	137	711
28		45	25	131	37	134	153	81	166	200
Feb. 4		58	32	198	37	125	155	81	161	185
11		158	31	276	37	155	133	81	108	292
18		187	32	129	41	148	167	76	119	827
25		186	52	134	39	110	214	100	172	209
Mar. 4		143	756	134	39	66	176	98	140	191
11		43	672	107	40	420	139	182	101	163
18		120	195	45	41	153	68	83	156	523
25		239	241	45	40	133	38	138	149	340
Apr. 1		155	160	41	55	164	39	200	636	353
8		48	151	58	450	176	39	181	476	1080
15		101	34	114	166	151	79	691	297	445
22		156	461	63	144	133	297	252	451	160
29		749	144	34	145	40	168	176	211	154
May 6		202	148	57	96	38	77	47	162	64
13		134	156	41	143	37	117	43	70	57
20		50	34	57	151	36	136	114	41	60
27		98	87	71	358	37	73	63	152	74
June 3		69	30	43	169	36	45	169	35	36
10		170	56	36	73	46	45	255	39	5.2
17		83	88	35	43	34	47	172	47	45
24		48	35	57	42	22	47	130	54	52
July 1		39	93	39	44	7.8	28	67	30	48
8		27	89	34	46	23	19	47	2.6	4.2
15		27	262	5.4	21	8.4	4.8	48	28	5.1
22		6.4	115	166	16	4.5	5.0	36	47	24
29		8.4	34	138	29	2.0	4.2	26	22	94
Aug. 5		1.6	34	51	69	5.2	5.4	110	2.3	89
12		8.4	36	40	265	2.2	6.5	44	4.5	67
19		67	69	42	330	5.1	5.6	46	2.6	67
26	59	85	114	42	152	1.4	6.1	47	4.8	60
Sept. 2	90	32	190	9.0	116	3.5	3.1	36	7.8	55
9	89	238	34	.71	38	.71	6.5	623	37	59
16	47	84	32	5.6	42	.77	7.1	297	48	48
23	52	637	48	21	21	1.1	6.5	249	50	25
30	55	176	44	16	1.7	4.5	6.5	94	39	7.8
Oct. 7	59	50	1210	10	12	1.2	3.0	47	46	24
14	74	39	99	.45	1.6	1.0	2.8	49	47	36
21	103	35	36	.52	1.5	23	2.7	48	8.4	25
28	28	32	34	.52	46	38	4.5	50	4.5	21
Nov. 4	1.5	35	48	1.2	16	54	2.5	49	22	23
11	39	32	150	.58	2.6	109	3.8	47	34	23
18	23	25	98	3.1	4.4	120	2.3	24	103	22
25	1.4	25	56	1.3	5.6	125	2.0	23	60	21
Dec. 2	.78	25	165	1.9	2.2	148	.65	762	61.0	2.5
9	393	26	194	1.7	7.1	138	.27	198	64	13
16	193	28	87	3.5	45	132	4.8	175	100	120
23	227	4.3	81	38	43	134	.71	113	99	162
31	137	.32	67	68	37	484	4.1	129	50	89
Maximum		749	1210	276	450	484	297	762	6360	1080
Minimum		0.32	0.32	0.45	1.5	0.71	0.27	23	2.3	2.5

Flat River at Dam near Bahama, N. C.

Mean Weekly Discharge in Million Gallons per day

Week ending	1937	1938	1939	1940	1941	1942	1943	1944	1945	
Jan. 7	685	70	135	34	129	1.4	189	54	90	
14	245	167	96	60	81	1.4	108	52	209	
21	736	172	112	96	136	1.5	134	133	97	
28	253	181	148	99	109	1.6	238	57	83	
Feb. 4	418	112	191	102	85	1.5	306	18	46	
11	220	58	435	234	52	1.5	505	7.1	41	
18	182	59	342	227	58	17	177	318	575	
25	196	60	187	282	60	48	76	197	406	
Mar. 4	193	61	399	193	43	25	78	90	180	
11	189	71	206	165	106	104	234	228	185	
18	70	130	337	107	115	89	121	333	79	
25	153	85	187	107	59	25	174	315	74	
Apr. 1	103	60	240	100	138	68	174	287	52	
8	291	59	254	57	178	59	81	168	21	
15	199	114	174	63	129	33	72	592	15	
22	147	74	130	92	62	7.1	293	251	134	
29	551	52	83	149	57	2.6	112	162	84	
May 6	208	43	381	56	37	85	79	39	28	
13	115	22	147	59	36	61	30	75	16	
20	68	21	60	54	30	276	28	39	57	
27	72	22	61	328	17	138	47	63	48	
June 3	59	23	45	218	13	33	43	59	46	
10	41	35	30	91	7.8	196	18	25	12	
17	56	147	56	72	17	32	16	14	5.5	
24	54	917	63	258	25	17	13	3.3	92	
July 1	56	271	43	62	23	19	14	8.4	32	
8	55	188	111	51	24	23	20	1.3	34	
15	63	171	137	32	23	59	88	6.0	55	
22	34	169	59	37	24	16	27	67	539	
29	21	1670	116	17	4.8	26	14	15	347	
Aug. 5	80	327	107	9.7	3.6	32	6.1	30	60	
12	69	198	64	2.8	2.1	148	2.1	32	106	
19	188	65	470	423	2.2	186	2.1	2.4	61	
26	119	67	199	165	2.1	132	1.2	2.2	181	
Sept. 2	155	43	632	159	2.1	30	.19	2.3	61	
9	130	.15	125	59	1.9	43	.19	2.3	36	
16	114	9.0	64	48	2.8	51	.19	10	129	
23	52	25	54	26	3.5	21	.19	634	1700	
30	55	25	34	18	3.0	39	.19	652	101	
Oct. 7	23	60	41	14	1.7	36	.19	270	39	
14	52	36	26	12	2.1	42	.19	59	30	
21	76	26	28	9.7	1.9	558	.19	110	33	
28	74	25	20	9.0	2.0	130	.19	127	23	
Nov. 4	54	26	17	10	3.5	118	.19	47	20	
11	56	22	17	10	1.8	35	.19	34	19	
18	56	4.1	17	371	2.0	35	.19	30	19	
25	56	116	17	165	2.1	187	.19	28	19	
Dec. 2	57	87	21	54	2.3	164	.21	309	23	
9	59	110	29	32	14	172	.26	206	238	
16	61	141	30	32	22	203	.26	174	78	
23	56	59	30	32	1.5	145	.28	94	55	
31	50	99	26	116	1.5	216	.32	66	665	
Maximum	736	1670	632	423	178	558	505	652	1700	
Minimum	21	0.15	17	2.8	1.5	1.4	0.19	1.8	5.5	

Little River near Princeton, N. C.

Location.- Water-stage recorder, lat 35 30'40", long. 78 09'30", a quarter of a mile upstream from county bridge, three-quarters of a mile upstream from Little Creek, and 3 miles north of Princeton, Johnston County.

Drainage area.- 229 square miles.

Records available.- February 1930 to date.

Average discharge.- 14 years, 169 million gallons per day

Extremes.- 1930-45: Maximum discharge, 2,600 million gallons per day Dec. 2, 1934 (gage height, 12.68 feet); minimum, 0.65 million gallons per day several times in Sept. 1932 and Oct. 2, 3, 1932.

Maximum stage known, 14.90 feet September 1924.

Remarks.- Considerable regulation for short periods by mills above station. Automatic recorder installed November 16, 1934; staff gage prior to this date.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1930			154	142	49.1	217	40.4	12.9	13.2	7.88	16.0	64.1	
1931	115	76.9	89.8	214	232	57.4	238	506	91.7	22.1	14.2	104	152
1932	183	191	232	112	71.7	91.1	20.0	20.3	2.07	23.9	84.0	259	107
1933	281	294	152	209	57.0	20.5	22.5	43.0	29.2				
*1934	18.8	32.0	137	246	60.9	211	133	208	148	44.5	78.2	408	154
1935	313	162	241	249	160	37.9	136	24.5	175	29.0	104	130	147
1936	636	633	419	530	46.3	180	143	178	57.3	185	203	463	305
1937	576	541	271	450	109	57.4	141	197	123	43.7	53.7	70.4	218
1938	129	78.1	82.7	156	62.4	309	149	56.5	273	64.1	69.1	158	132
1939	184	616	438	162	116	98.8	512	395	131	43.2	41.2	54.6	231
1940	107	210	209	194	95.0	65.9	43.2	324	47.0	19.2	57.3	69.1	120
1941	100	104	186	171	36.2	51.7	348	45.1	12.7	7.17	20.0	43.3	94.3
1942	42.8	96.3	212	89.8	180	47.5	45.3	193	138	586	122	233	167
1943	380	266	278	163	60.3	231	333	26.0	20.2	12.5	23.2	49.4	153
1944	293	341	636	420	74.3	28.3	84.6	78.2	22.5	172	55.8	172	198
1945	175	293	206	77.5	60.6	25.6	141	324	439	73.6	62.7	331	183

*Record used January 18 - 31

Little River near Princeton, N. C.

Maximum Stream Flow in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1930			523	421	93	1340	98	36	66	18	57	182	
1931	272	105	214	846	1360	362	1040	1470	610	40	22	236	1470
1932	506	390	749	236	225	362	57	105	7.1	110	193	645	749
1933	866	665	362	736	105	49	78	132	138				
1934*	28	48	322	576	182	1180	593	924	523	110	756	2470	2470
1935	704	417	672	446	775	65	704	47	1050	84	312	528	1050
1936	1130	1660	1090	2110	81	891	866	866	147	542	775	1180	2110
1937	2240	1940	481	1620	413	213	711	840	492	68	97	136	2240
1938	262	103	225	808	154	995	620	127	2070	120	120	492	2070
1939	397	1200	1180	691	322	383	1900	1090	1070	90	86	128	1900
1940	225	364	628	376	198	175	240	2060	85	32	166	162	2060
1941	205	275	555	376	63	120	1440	146	27	33	56	93	1440
1942	59	256	424	262	652	158	274	583	736	2330	240	443	2330
1943	1110	643	698	519	178	1160	1400	61	52	26	47	187	1400
1944	827	564	1670	1410	182	138	610	527	163	1140	226	384	1670
1945	413	595	457	200	103	43	486	1000	2270	130	110	801	2270

Minimum Stream Flow in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1930			88	62	12	19	11	8.4	6.5	4.7	7.8	9.7	
1931	64	48	48	64	57	12	14	67	16	11	8.4	14	8.4
1932	88	99	88	65	37	26	2.1	3.5	.65	.65	6.5	36	.65
1933	132	171	83	78	28	4.9	3.7	16	3.5				
1934*	5.9	13	52	63	24	36	33	31	56	7.8	9.0	101	5.9
1935	136	92	101	103	47	7.1	7.8	2.5	12	9.7	17	47	2.5
1936	94	163	136	89	13	7.8	29	21	16	41	52	78	7.8
1937	271	256	134	108	28	14	29	19	15	12	16	49	12
1938	64	55	47	36	18	45	16	11	18	18	26	65	11
1939	96	211	132	70	39	22	17	54	20	16	18	22	16
1940	52	75	89	89	50	23	10	12	17	14	16	30	10
1941	61	70	71	48	15	17	28	12	5.8	1.4	11	9.0	1.4
1942	29	45	74	38	38	28	7.1	27	28	29	77	97	7.1
1943	122	91	85	76	28	12	57	2.1	6.1	8.4	14	15	2.1
1944	112	83	157	151	21	12	10	14	12	33	30	87	10
1945	85	70	70	33	28	19	14	39	48	41	41	54	14

* Record used January 18-31.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
Jan. 7		81	114	198		401	640	429	76	169	65	100	51
14		120	356	203		344	859	474	214	123	99	71	40
21		170	152	264		163	678	382	112	222	138	102	37
28		105	104	423	22	392	563	384	123	190	136	111	38
Feb. 4		72	213	287	22	154	236	1620	103	265	80	110	59
11		61	236	255	25	112	672	466	79	454	234	97	61
18		91	209	438	36	220	1190	431	74	917	198	154	73
25		90	156	271	37	130	456	410	67	541	301	83	178
Mar. 4		72	101	159	49	256	231	340	74	1040	162	82	99
11	264	76	488	161	72	131	203	285	94	609	119	261	276
18	134	60	183	120	130	243	557	295	121	351	356	174	193
25	129	120	132	228	173	136	691	242	68	220	194	85	234
Apr. 1	101	112	207	97	230	467	341	183	56	141	197	296	193
8	215	409	150	102	138	328	827	672	92	121	125	270	84
15	137	269	125	128	441	272	1070	398	394	107	216	207	162
22	141	99	87	433	319	183	185	160	96	320	229	69	69
29	94	114	71	207	118	209	127	591	68	99	213	132	47
May 6	63	74	81	83	53	92	75	306	40	241	91	57	233
13	46	618	53	80	37	68	48	106	27	118	62	43	240
20	54	137	56	37	103	71	47	91	84	99	62	34	219
27	38	377	52	36	50	440	34	45	69	58	127	27	85
June 3	41	75	117	45	79	79	23	35	113	122	156	23	43
10	171	39	44	21	196	56	23	75	249	115	70	61	37
17	289	91	186	23	115	33	39	50	89	68	54	46	85
24	408	72	84	9.7	494	30	495	48	542	94	63	46	36
July 1	56	20	52	23	61	21	218	95	424	74	36	62	33
8	61	342	43	23	90	30	147	127	90	220	33	307	14
15	30	289	22	9.7	159	205	47	57	43	220	92	556	14
22	45	222	11	15	63	252	66	57	41	510	41	594	9.0
29	34	191	52	28	224	100	182	195	393	1150	17	59	106
Aug. 5	19	344	6.5	69	189	36	636	266	114	274	14	69	86
12	12	533	56	57	140	34	121	81	61	93	25	29	100
19	11	833	16	26	72	21	55	61	37	352	950	22	306
26	12	472	9.0	28	98	21	34	104	24	548	406	65	362
Sept. 2	10	81	5.1	37	551	21	155	646	90	898	67	34	68
9	7.8	246	3.6	37	136	465	51	187	107	150	57	21	210
16	24	39	2.1	54	148	194	95	126	34	55	57	16	283
23	14	28	.84	20	266	45	36	47	885	49	33	7.8	42
30	9.0	67	.97	8.4	159	39	28	32	127	39	31	7.8	43
Oct. 7	9.0	29	3.0		72	48	133	32	83	73	22	7.1	45
14	5.4	22	4.5		51	30	267	54	55	45	17	5.2	398
21	6.4	19	48		32	23	307	40	39	34	17	2.8	1650
28	9.7	22	31		30	17	87	49	79	29	21	5.3	388
Nov. 4	12	14	42		26	34	59	48	58	30	21	28	197
11	21	17	82		43	91	211	41	63	37	27	29	113
18	18	13	56		37	208	427	65	48	34	94	13	140
25	13	13	130		50	83	114	50	78	56	69	16	99
Dec. 2	16	14	88		724	59	118	59	106	44	57	15	119
9	34	123	58		749	54	263	69	149	41	46	39	201
16	36	106	300		117	245	743	57	136	36	46	36	326
23	61	83	367		226	145	749	56	81	37	63	33	213
31	129	126	352		159	98	230	100	269	99	118	70	226
Maximum		833	488		749	467	1190	1620	885	1150	950	594	1650
Minimum		13	0.84		22	17	23	32	24	29	14	2.8	9.0

Little River near Princeton, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1943	1944	1945							
Jan. 7	218	286	151							
14	240	202	302							
21	518	581	165							
28	452	178	118							
Feb. 4	469	104	81							
11	472	216	141							
18	201	464	348							
25	138	448	456							
Mar. 4	92	311	398							
11	419	607	331							
18	178	575	176							
25	257	1150	120							
Apr. 1	356	419	80							
8	121	264	54							
15	132	685	41							
22	258	455	84							
29	148	309	130							
May 6	58	120	76							
13	61	92	50							
20	53	37	62							
27	71	39	45							
June 2	48	105	65							
10	294	36	27							
17	499	18	26							
24	101	19	22							
July 1	98	12	21							
8	337	12	18							
15	782	15	15							
22	225	303	330							
29	94	34	222							
Aug. 5	68	176	282							
12	29	118	260							
19	18	33	98							
26	17	17	635							
Sept. 2	22	14	213							
9	23	13	120							
16	7.1	12	124							
23	17	17	1460							
30	32	50	159							
Oct. 7	15	537	92							
14	12	52	85							
21	9.7	54	53							
28	9.0	105	70							
Nov. 4	20	39	52							
11	23	36	74							
18	32	52	64							
25	22	57	59							
Dec. 2	19	174	62							
9	23	222	347							
16	29	214	274							
23	19	107	290							
31	123	105	469							
Maximum	782	1150	1460							
Minimum	7.1	12	15							

Middle Creek near Clayton, N. C.

Location.- Water-stage recorder, lat. $35^{\circ}34'10''$, long. $78^{\circ}35'30''$, at bridge on State Highway 50, a quarter of a mile upstream from Buffalo Branch, $3\frac{1}{4}$ miles downstream from county line, and $9\frac{1}{4}$ miles southwest of Clayton, Johnston County.

Drainage area.- 80.7 square miles.

Records available.- November 1939 to date.

Average discharge.- 6 years, 58.1 million gallons per day.

Extremes.- 1939-45: Maximum discharge, 1770 million gallons per day Sept. 18, 1942; (gage height, 11.70 feet); minimum, 1.09 million gallons per day Aug. 8, 1940.

Remarks.- Slight diurnal fluctuation at low stages caused by gristmills above station. Automatic recorder used throughout record.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1939											20.7	27.1	
1940	44.5	81.4	90.4	86.6	34.4	13.7	5.52	23.9	7.88	3.58	12.1	20.1	35.1
1941	30.7	29.8	65.9	93.8	13.2	11.6	166	20.9	6.59	5.61	4.70	34.7	40.9
1942	20.4	46.4	96.9	42.1	36.6	44.7	24.6	95.6	78.2	72.4	49.3	81.3	57.5
1943	162	99.5	92.4	62.8	22.9	72.4	133	17.4	24.0	10.0	18.6	46.1	63.4
1944	136	132	220	145	43.9	11.6	11.1	28.4	10.1	76.9	31.8	77.5	76.9
1945	59.2	108	81.4	43.6	26.2	8.27	16.9	122	210	42.7	30.2	152	74.9

Middle Creek near Clayton, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1939											50	79	
1940	107	174	291	258	120	42	12	185	27	5.5	43	50	291
1941	70	76	247	479	36	40	730	121	24	52	6.3	136	730
1942	45	180	267	183	165	353	195	552	612	249	112	189	612
1943	775	347	249	221	52	55	756	61	169	26	95	239	775
1944	497	249	950	494	191	26	41	183	65	581	165	206	950
1945	149	276	191	168	61	28	56	872	1650	155	54	452	1650

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1939											11	15	
1940	25	30	35	42	14	5.7	2.4	1.3	3.9	2.3	3.5	10	1.3
1941	18	21	19	22	5.6	4.8	8.4	8.4	3.0	2.0	4.0	4.0	2.0
1942	13	16	21	16	13	9.7	4.7	7.8	14	12	30	45	4.7
1943	48	43	42	30	9.7	7.8	21	6.5	6.1	7.8	11	13	6.1
1944	48	48	65	65	15	7.8	5.6	9.0	4.4	14	17	43	4.4
1945	35	32	36	17	12	3.2	3.6	21	22	19	18	25	3.2

Mean Weekly Discharge in Million Gallons per day

Week Ending	1939	1940	1941	1942	1943	1944	1945					
Jan. 7		27	28	30	85	192	64					
14		56	20	19	79	92	82					
21		65	34	18	299	238	56					
28		39	37	16	131	59	45					
Feb. 4		32	32	26	182	49	34					
11		109	26	31	189	98	50					
18		65	43	50	70	185	121					
28		109	25	75	63	145	185					
Mar. 4		63	25	57	47	121	141					
11		46	92	156	139	189	114					
18		160	47	68	64	189	64					
25		74	29	104	103	404	61					
Apr. 1		98	121	61	84	164	41					
8		58	209	28	49	110	28					
15		92	76	95	56	218	20					
22		132	41	28	105	125	47					
29		68	91	19	48	136	82					
May 6		43	25	23	25	54	32					
13		25	10	18	30	90	20					
20		18	16	76	26	28	32					
27		58	9.0	40	17	23	19					
June 3		23	10	13	11	15	22					
10		12	17	33	153	11	10					
17		11	9.0	100	114	13	7.1					
24		20	5.9	42	21	13	9.0					
July 1		7.1	14	14	29	8.4	5.7					
8		7.1	81	9.0	111	7.8	6.2					
15		8.4	307	12	318	12	6.4					
22		4.7	302	6.4	88	17	34					
29		3.0	37	76	51	7.8	24					
Aug. 5		2.2	17	20	22	25	223					
12		3.4	24	41	18	70	70					
19		80	9.7	146	13	16	43					
26		14	39	201	7.1	11	157					
Sept. 2		9.0	12	30	30	9.0	59					
9		7.8	9.7	206	11	5.1	72					
16		12	4.3	65	7.8	5.9	130					
23		6.3	3.2	18	56	14	631					
30		5.5	9.0	37	25	16	59					
Oct. 7		4.2	4.1	19	11	162	76					
14		3.5	3.0	47	8.4	17	45					
21		3.0	2.4	133	8.4	37	28					
28		3.3	9.0	97	8.4	115	30					
Nov. 4		6.3	9.0	54	15	21	23					
11	13	4.5	4.8	48	34	21	32					
18	15	19	4.4	51	17	21	28					
25	13	13	4.7	55	14	26	32					
Dec. 2	31	15	4.3	50	13	103	30					
9	22	12	32	77	20	92	189					
16	17	14	22	74	17	92	110					
23	19	23	12	81	16	50	91					
31	54	32	75	98	128	54	242					
Maximum		160	302	206	318	404	631					
Minimum		2.2	2.4	9.0	7.1	5.1	5.7					

Neuse River near Clayton, N. C.

Location.-Water-stage recorder, lat. 35°38'55", long. 78°24'30", at bridge on State Highway 42, 1.8 miles upstream from Mill Creek and 3 miles east of Clayton, Johnston County. Datum of gage is 128.12 feet above mean sea level (levels by Corps of Engineers, U. S. Army). Prior to Mar. 18, 1942, at site 600 feet upstream at same datum.

Drainage area.- 1,140 square miles.

Records available.- July 1927 to date.

Average discharge.- 18 years, 810 million gallons per day.

Extremes.- 1927-45: Maximum discharge, 18,150 million gallons per day Oct. 3, 1929 (gage height, 21, 62 feet, former site), from rating curve extended above 9,110 million gallons per day; minimum, 30 million gallons per day Sept. 15, 1932 (gage height, 0.28 foot, former site).

Remarks.- Slight diurnal fluctuation at low stages and notable natural upstream storage during severe floods. Automatic recorder used throughout record.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1927							542	659	404	484	221	1583	
1928	518	995	885	1279	1072	652	357	956	3941	463	284	261	969
1929	309	1079	3101	911	930	1040	1402	717	326	3247	1227	956	1276
1930	866	1118	541	593	328	617	439	178	156	119	187	470	462
1931	590	308	463	1208	1189	348	641	1970	237	119	108	326	629
1932	1273	904	1557	691	388	328	120	105	46.3	426	853	1744	704
1933	1253	1131	589	1214	378	200	165	299	99.5	49.4	76.9	74.3	456
1934	85.9	206	1033	2009	593	1040	426	659	1143	217	676	2150	854
1935	1170	856	1346	1975	653	274	426	126	647	169	439	592	718
1936	3226	2654	1948	2694	324	610	698	701	371	638	329	1506	1313
1937	3066	1637	1016	1776	716	448	443	1626	950	436	425	426	1078
1938	957	515	707	708	353	1410	1955	800	246	205	393	695	748
1939	772	2991	1873	1033	873	437	983	2326	857	261	259	324	1071
1940	540	1346	886	1140	729	521	209	1338	207	103	717	422	676
1941	588	435	891	988	208	259	748	116	73.0	71.1	78.2	214	390
1942	131	539	831	312	711	220	239	774	514	974	580	1117	581
1943	1788	1220	1281	993	372	479	517	96.9	103	82.7	120	189	601
1944	933	1475	2063	1685	495	183	407	352	693	1873	524	1127	984
1945	902	1747	851	477	362	189	1419	893	3850	388	329	1621	1079

Neuse River near Clayton

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1927							1670	4220	1340	1810	588	5390	
1928	846	2480	2660	4840	6030	2740	1210	2330	7620	1210	379	379	7620
1929	616	5310	8660	2920	3570	3770	4110	1580	581	14000	4330	2750	14000
1930	2340	3040	1040	1670	520	2800	2130	659	484	284	484	1720	3040
1931	1090	368	1380	3490	3530	1330	2380	6850	1090	181	139	652	6850
1932	4200	1800	6040	1350	1740	969	447	366	95	2350	2120	3940	6040
1933	2470	2580	885	4840	762	392	445	1200	191	94	116	101	4840
1934	142	1620	2710	5430	2580	2700	1240	3170	3110	358	9430	11300	11300
1935	3110	2940	3150	3570	1850	385	1190	231	3750	320	1160	2400	3750
1936	6410	6270	5310	7950	513	2580	4530	3630	2220	2810	820	5700	7950
1937	6200	4280	1770	5370	4080	866	2150	5980	3390	801	1160	840	6200
1938	2750	943	1980	2340	924	4150	7620	6520	969	288	1520	2030	7620
1939	1430	7430	4860	2690	3330	1110	2520	7430	5700	643	406	988	7430
1940	1670	2930	2870	4600	2930	1720	452	7110	444	121	3100	1120	7110
1941	1290	1250	2930	3890	367	891	3820	267	125	406	94	833	3890
1942	182	3490	2690	814	2640	634	485	3290	3130	3320	2560	2680	3490
1943	5200	3200	3030	3260	801	2420	1670	237	407	256	373	891	5200
1944	3630	3610	5610	4280	1400	377	1810	1720	3180	8590	3730	4550	8590
1945	2580	4130	1940	1090	743	514	4840	2000	14500	698	423	5370	14500

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1927							152	100	132	124	142	199	
1928	375	422	391	375	302	199	106	63	348	274	247	210	63
1929	199	234	724	411	379	332	379	302	247	352	449	556	199
1930	417	556	401	337	202	192	124	106	81	56	106	171	56
1931	323	259	235	484	417	181	171	384	112	81	87	92	81
1932	326	536	378	329	206	154	65	45	29	44	255	333	29
1933	652	711	376	364	189	121	60	118	52	31	47	52	31
1934	52	71	445	428	169	213	187	150	233	165	175	498	52
1935	554	498	612	652	343	151	133	70	114	96	181	280	70
1936	323	685	605	549	216	155	157	203	153	241	229	249	153
1937	975	924	536	513	298	241	187	256	267	244	293	312	187
1938	428	393	378	298	183	256	393	222	127	157	161	329	127
1939	461	1010	698	444	331	212	238	264	226	174	200	216	174
1940	331	420	495	412	329	220	117	114	112	92	99	211	92
1941	355	305	280	324	129	116	110	70	49	37	69	73	37
1942	107	127	256	158	169	124	76	101	107	140	253	563	76
1943	509	467	450	505	250	151	151	49	48	59	84	76	48
1944	298	239	493	588	245	87	63	91	63	247	244	409	63
1945	420	355	369	250	222	111	102	331	288	269	269	302	102

Neuse River near Clayton, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Jan. 7		581	239	541	526	448	1000	104	1880	3680	3460	631	678
14		503	397	470	678	3490	1300	83	820	4950	2340	1810	523
21		402	349	1320	769	736	1390	68	642	2970	2070	672	917
28		559	264	1160	498	531	1410	98	1520	2820	3340	859	904
Feb. 4		615	266	1050	313	1070	859	103	672	859	4070	672	1350
11		1140	437	2120	284	1160	910	87	532	2670	1360	457	2950
18		801	995	769	306	911	1650	114	950	4510	1370	411	5160
25		1330	1440	622	351	717	1140	114	762	2760	1670	482	1660
Mar. 4		730	4940	567	311	485	795	917	1380	814	1150	553	3780
11		490	6420	736	348	3860	618	988	672	795	1130	609	2090
18		930	1660	485	284	1140	578	698	1760	1950	1120	1200	1760
25		1670	1170	505	672	724	659	820	846	3880	904	730	1190
Apr. 1		659	975	414	665	1090	410	1810	2430	1800	756	404	1030
8		407	627	833	2120	937	622	833	2760	4430	1400	537	1560
15		1590	488	627	1660	891	685	4560	2360	5290	1650	1460	853
22		898	1930	590	532	508	2850	2360	1010	872	756	455	891
29		1860	586	382	678	430	924	570	1930	659	3020	487	579
May 6		3620	801	334	510	408	473	320	560	457	2140	272	2130
13		598	1230	290	1720	335	506	209	486	352	672	211	917
20		393	474	370	546	271	342	1390	480	309	497	428	435
27		509	1380	360	2240	223	291	379	1230	267	371	350	402
June 3		413	603	253	496	636	260	820	364	214	390	468	510
10		1460	640	659	346	212	180	1650	284	170	514	548	627
17		629	1320	383	434	403	193	911	273	565	464	541	391
24		260	632	1270	314	318	131	1130	229	1300	344	2580	349
July 1		399	2130	253	233	430	255	366	165	532	494	2520	256
8		220	1780	277	713	183	118	537	293	548	532	704	846
15		377	1400	202	426	115	217	324	589	229	344	639	872
22		536	1780	1000	546	78	136	366	641	632	286	606	891
29	318	330	639	346	1030	67	183	370	289	782	609	4280	1270
Aug. 5	659	99	615	326	1720	121	464	678	146	2130	548	4110	795
12	417	327	827	161	3030	187	432	298	134	518	413	795	386
19	163	1490	698	166	2250	75	167	186	96	280	1140	335	1470
26	956	1590	538	136	1480	68	193	491	135	230	1470	275	4900
Sept. 2	1040	853	756	112	441	50	178	1620	141	898	4410	249	4760
9	698	5750	344	188	391	43	129	455	1700	240	1960	182	1140
16	413	3020	276	194	196	36	117	1730	461	769	814	131	341
23	203	5680	299	143	173	47	69	2100	207	278	330	466	276
30	158	2340	330	114	156	58	57	517	370	207	279	213	321
Oct. 7	194	646	9750	100	131	91	45	268	227	636	384	237	415
14	1010	625	2310	85	103	94	35	252	173	1210	425	211	248
21	652	335	372	163	119	1290	50	185	134	583	374	164	2213
28	227	318	1780	101	107	315	63	178	125	289	568	212	197
Nov. 4	150	315	743	171	142	360	59	221	220	238	366	193	237
11	174	293	1990	278	101	904	89	264	451	278	310	258	239
18	247	262	904	166	104	461	78	211	711	521	685	175	205
25	311	291	659	169	110	937	76	233	348	283	386	769	332
Dec. 2	222	262	1390	158	112	1250	73	4860	350	268	359	484	244
9	3390	262	1690	343	297	428	71	4030	299	743	382	769	229
16	1020	272	691	243	370	2070	77	616	1120	3220	353	652	224
23	1900	288	769	338	329	1510	82	1260	691	1880	338	362	233
31	534	222	736	962	360	3100	70	691	344	659	621	1040	599
Maximum		5750	9750	2120	3030	3860	2850	4860	2760	5290	4410	4280	5160
Minimum		99	239	85	101	36	35	68	96	170	279	131	197

Neuse River near Clayton, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1940	1941	1942	1943	1944	1945						
Jan. 7	368	685	152	1160	1210	891						
14	441	413	126	736	421	1430						
21	963	769	126	2330	1890	891						
28	440	530	123	1710	475	587						
Feb. 4	430	425	134	2230	295	406						
11	2000	348	212	2350	523	446						
18	1270	636	769	859	2530	2000						
25	1630	387	963	566	2400	3370						
Mar. 4	711	323	448	472	704	1830						
11	730	1340	1450	1980	158	1400						
18	1600	659	788	808	2320	628						
25	659	388	628	1290	3630	529						
Apr. 1	665	1520	575	1460	1710	404						
8	524	2120	367	605	1150	306						
15	1200	885	462	704	2330	261						
22	1860	416	239	1520	2180	587						
29	1100	616	170	1200	1070	769						
May 6	494	313	386	447	497	373						
13	426	231	452	378	859	247						
20	375	202	1370	335	336	438						
27	1200	155	814	302	377	318						
June 3	1290	279	217	362	352	393						
10	436	384	167	795	211	180						
17	368	243	375	589	213	168						
24	743	143	182	354	145	233						
July 1	240	161	169	259	96	145						
8	222	552	238	640	80	179						
15	284	1570	303	969	318	189						
22	217	885	146	354	943	3310						
29	125	217	286	212	231	2220						
Aug. 5	141	183	187	160	911	963						
12	183	99	659	87	521	615						
19	4180	86	1130	78	157	988						
26	963	155	1380	55	109	1360						
Sept. 2	621	83	217	153	105	495						
9	258	94	1200	79	71	581						
16	230	66	537	69	137	1050						
23	143	55	162	164	1470	11600						
30	136	76	228	98	1260	3190						
Oct. 7	103	57	206	69	6170	479						
14	105	44	490	67	447	450						
21	99	40	2520	68	439	330						
28	104	92	769	116	1100	340						
Nov. 4	162	127	601	97	318	298						
11	128	78	344	176	286	329						
18	1720	74	303	121	282	317						
25	814	83	441	99	306	346						
Dec. 2	373	79	1290	96	2440	337						
9	236	284	1250	116	1440	1930						
16	233	176	1160	110	1130	885						
23	452	124	891	102	604	775						
31	756	301	1300	422	501	3050						
Maximum	4180	2120	2520	2330	6170	11600						
Minimum	99	40	123	55	71	145						

Neuse River near Goldsboro, N. C.

Location.- Water-stage recorder, lat. 35° 20' 40", long. 78° 01' 35", a quarter of a mile upstream from bridge on State Highway 40, 2½ miles upstream from Stoney Creek, and 3 miles south of Goldsboro, Wayne County. Datum of gage is 44.66 feet above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.- 2,370 square miles.

Records available.- February 1930 to date.

Average discharge.- 15 years, 1616 million gallons per day.

Extremes.- 1930-45: Maximum discharge, 19,800 million gallons per day Sept 23, 1945; maximum gage height, 26.7 feet Sept 23, 1945; Minimum discharge, 55 million gallons per day Sept. 14, 1932 (gage height, 1.03 feet).

Maximum discharge known, 24,940 million gallons per day Oct. 5, 1929 (gage height, 25.3 feet, site and datum then in use), by current-meter measurement.

Remarks.- Slight diurnal fluctuation, Automatic recorder installed July 22, 1931; chain gage prior to this date.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1930			1583	1382	523	1370	638	271	224	140	245	743	
1931	1337	736	950	2468	2216	628	1227	4703	606	232	196	885	1356
1932	2132	1835	2642	1279	711	788	291	189	74.9	500	1331	2991	1232
1933	3275	3308	1718	2584	956	318	269	730	503	109	134	156	1156
1934	206	373	1699	3314	879	1841	2048	1350	2035	507	463	4360	1596
1935	2685	1623	2370	3219	1250	427	1045	234	1707	344	959	1315	1428
1936	6173	5735	3934	6282	661	1249	1257	2117	875	2360	1709	4066	3026
1937	4815	5954	2632	3358	2201	634	796	1612	2401	597	665	802	2180
1938	1556	928	1125	1846	591	2310	2538	2241	1607	627	764	1351	1459
1939	1768	5382	4799	1860	1428	855	2124	2994	2173	541	480	580	2063
1940	1168	2382	2000	2211	1050	903	399	2083	417	180	882	696	1192
1941	1056	1013	1747	2211	433	508	2449	432	153	107	138	402	888
1942	361	904	2054	932	1195	702	368	1709	1339	3257	1244	2054	1350
1943	3157	2919	2610	2211	859	1621	2410	382	348	167	258	512	1450
1944	2620	3234	4844	3800	1040	351	495	771	566	2090	559	2076	1869
1945	1664	2540	2262	797	608	373	1875	3197	5901	1309	812	2733	2002

Neuse River near Goldsboro, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1930			3370	2920	827	3420	2030	549	743	306	394	2570	
1931	2530	924	2420	5060	4320	1950	2610	7240	1490	390	243	1740	7340
1932	5280	2860	7040	2660	1850	2270	1460	580	99	2420	2540	6090	7040
1933	5500	4490	2980	6240	2380	522	428	2580	1670	153	166	199	6240
1934	271	820	3270	6010	2810	3820	3620	3490	3920	1490	2020	14100	14100
1935	4340	3020	4340	4550	3310	691	3660	428	4910	1030	2290	3510	4910
1936	11200	10600	6720	17000	1280	3450	3180	6200	2400	4070	4260	9430	17000
1937	8200	14200	3620	6590	7040	969	2100	5790	7490	982	1470	1450	14200
1938	3070	1300	2360	4750	1270	5970	6520	7300	6650	1010	1910	3120	7300
1939	3050	9370	10000	3570	3040	2110	4810	7240	7040	1540	814	1480	10000
1940	2480	4050	4410	4460	2550	1840	1180	7240	866	247	2760	1760	7240
1941	1700	2200	3890	3850	1124	1010	6110	775	263	426	272	969	6110
1942	499	2780	3600	1890	2470	2430	937	4110	4530	7750	2470	3510	7750
1943	5780	4670	4190	3890	1450	4760	4580	808	885	302	543	2030	5780
1944	4990	5170	8270	6030	2210	599	2070	2750	2270	5530	1900	4130	8270
1945	3200	5030	5170	1680	1000	704	4490	5080	19700	6310	1090	4530	19700

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1930			1020	698	327	306	231	155	136	116	145	216	
1931	795	575	497	1180	827	248	202	439	293	185	167	201	167
1932	853	1150	769	638	404	313	100	92	58	71	370	724	58
1933	1670	2270	1020	891	453	199	169	234	149	89	101	130	89
1934	164	211	827	982	358	565	534	404	736	271	271	1180	164
1935	1410	1120	1210	1310	678	223	196	164	252	204	324	543	164
1936	775	1830	1830	1340	358	292	370	404	370	1030	711	1030	292
1937	2020	3000	1510	1470	536	371	360	549	407	413	439	594	360
1938	775	724	672	672	328	698	698	401	317	375	401	749	317
1939	1010	2740	1630	982	576	355	436	659	401	311	344	389	311
1940	630	930	1070	1010	578	436	154	147	218	152	163	423	147
1941	659	704	717	717	202	234	348	205	93	68	109	138	68
1942	283	386	652	360	386	244	141	301	283	301	782	1340	141
1943	1370	1170	1110	1230	514	336	469	138	145	123	168	217	123
1944	1110	820	1700	1720	519	166	139	166	112	441	402	866	112
1945	950	788	898	441	379	244	244	924	788	672	643	724	244

Mean Weekly Discharge in Million Gallons per day

Week Ending	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
Jan. 7		1220	1120	4310	207	3430	2690	3210	917	1970	820	1210	443
14		1160	2710	2330	193	2820	9630	6360	2550	1150	885	879	356
21		1930	3860	3290	177	1610	6780	4090	1470	1890	1820	1070	309
28		1270	1110	2630	229	2980	6350	4650	1340	1890	1210	988	321
Feb. 4		749	1750	3610	276	1880	3050	10300	1300	2690	969	1050	421
11		594	2340	2510	317	1210	4790	6850	950	3600	1960	820	502
18		795	1830	4140	368	1930	6460	4300	840	6780	3330	1270	517
25		879	1570	3380	411	1900	8850	3530	736	7170	2890	1110	2000
Mar. 4	1510	691	1140	2100	1070	2440	3290	3680	963	6410	1780	827	762
11	2220	769	2680	1660	1310	1530	2000	3160	820	8720	1460	1960	2190
18	1760	645	5650	1440	1520	2550	3950	2380	1690	4090	2210	2600	2780
25	1250	975	1430	2330	1830	1720	5700	2610	1380	2840	2950	1000	2080
Apr. 1	1090	1650	1800	1240	2490	3520	5040	1870	711	1660	1640	2190	1890
8	1440	2560	1770	963	2430	3960	5290	2400	917	2310	1560	3330	1120
15	1870	4640	1490	1540	3060	3950	13500	5170	3960	1650	1710	2940	1310
22	1300	1390	1030	3800	5480	1890	5550	2010	1460	2210	2250	1050	801
29	1070	1560	704	4440	2600	3070	1800	3660	1380	1360	3460	1440	430
May 6	612	1100	846	1240	788	1270	1130	6390	563	2010	1130	879	691
13	453	2710	567	1720	475	749	756	2140	366	2190	7560	492	1180
20	629	1780	574	685	1230	782	552	1160	678	988	659	352	1330
27	513	2740	588	499	1210	2400	464	678	491	717	1020	281	1800
June 3	401	2000	1040	490	956	866	353	534	969	1010	1960	245	515
10	769	594	350	333	1910	555	326	678	1390	1480	1060	621	265
17	2280	445	1200	323	2090	391	911	736	1310	820	599	581	1640
24	2160	975	1100	233	2510	419	1940	585	2450	646	1110	357	618
July 1	517	371	593	311	840	238	2140	631	5270	386	488	581	362
8	453	1050	574	283	2140	304	1490	801	3440	853	368	1030	281
15	291	1230	224	223	1970	756	523	665	898	2180	520	2470	317
22	1180	1100	138	277	1450	2520	665	574	956	975	558	5370	238
29	736	1790	111	240	2930	853	2210	853	3290	4210	220	1730	528
Aug. 5	422	1800	121	426	2130	402	4330	1250	6850	2820	188	591	537
12	249	4860	368	1410	1020	247	3400	969	3240	924	218	452	685
19	223	6320	172	546	717	187	917	1440	678	1120	3120	268	2440
26	284	5590	132	468	638	216	460	820	485	4700	4970	409	3400
Sept. 2	167	2780	101	634	2890	257	1410	5160	600	6590	1000	412	917
9	149	1120	83	419	988	2140	563	4840	616	5760	555	218	1240
16	388	1120	68	943	2040	3700	1210	2390	369	769	464	147	3370
23	236	322	67	477	3350	879	672	629	3000	525	300	114	599
30	143	374	78	174	1430	494	724	435	2760	525	232	110	355
Oct. 7	129	259	107	133	872	611	2980	463	866	963	195	118	520
14	116	217	168	103	561	321	2580	659	613	545	203	87	1770
21	196	267	1010	95	386	269	3110	487	428	397	163	74	6780
28	123	193	704	107	307	222	1320	769	608	351	167	72	4280
Nov. 4	154	221	455	107	297	308	937	568	557	377	188	236	1950
11	300	189	1370	136	417	782	1170	450	574	438	267	141	1030
18	249	191	1160	132	368	1690	3310	950	484	372	1070	118	1080
25	251	191	1730	141	354	1010	1470	678	1050	608	1840	119	820
Dec. 2	218	196	1860	141	1740	625	1200	698	1160	528	672	136	1950
9	357	1010	930	138	10200	623	1480	814	1240	436	490	371	1630
16	505	950	1940	151	3570	1390	4360	672	1560	409	436	293	2920
23	615	730	5280	170	2080	2530	8080	616	859	417	698	311	1900
31	1520	1030	3900	170	2070	937	3300	1070	1790	1030	1120	672	1930
Maximum		6320	5650	4440	10200	3960	13500	10300	6850	8720	4970	5370	6780
Minimum		189	67	112	177	187	326	435	366	351	163	72	238

Neuse River near Goldsboro, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1943	1944	1945										
Jan. 7	3130	2310	1530										
14	1930	2410	2580										
21	2000	3790	1590										
28	5170	2580	1250										
Feb. 4	4320	1050	917										
11	3960	1320	1070										
18	3170	4100	2320										
25	1460	4990	4200										
Mar. 4	1160	3400	4870										
11	2740	3270	3350										
18	2800	5070	1710										
25	2240	5850	1320										
Apr. 1	3700	6420	969										
8	2000	3570	672										
15	1470	2980	497										
22	2140	5730	736										
29	3130	3060	1220										
May 6	1010	1510	853										
13	730	1590	514										
20	820	743	503										
27	691	612	594										
June 3	982	749	640										
10	788	449	370										
17	4250	355	363										
24	1050	288	304										
July 1	685	195	375										
8	2130	154	2810										
15	3950	171	320										
22	3380	1350	2400										
29	898	368	4260										
Aug. 5	613	1560	3090										
12	328	1230	3820										
19	399	410	1430										
26	264	211	4340										
Sept. 2	536	179	2770										
9	295	136	1330										
16	182	138	1400										
23	272	652	9690										
30	543	1450	12600										
Oct. 7	201	3290	2540										
14	154	3490	1320										
21	134	545	795										
28	137	1630	827										
Nov. 4	222	583	704										
11	228	450	937										
18	368	495	872										
25	243	544	775										
Dec. 2	221	1380	736										
9	286	3420	2240										
16	295	2670	3600										
23	266	1250	2520										
31	1190	956	3080										
Maximum	5170	6420	12600										
Minimum	134	136	304										

Neuse River at Kinston, N. C.

Location.- Water-stage recorder, lat. 35°15'30", long. 77°35'10", at Kinston, Lenoir County, two blocks downstream from bridge on State Highway 11, datum of gage is 10.80 feet above mean sea level (North Carolina Highway surveys).

Drainage area.- 2,690 square miles.

Records available.- February 1930 to date.

Average discharge.- 15 years, 1,867 million gallons per day.

Extremes.- 1930-45: Maximum discharge, 15,760 million gallons per day Apr. 14, 1936 (gage height, 20.9 feet); minimum 80 million gallons per day Sept. 26, 1932 (gage height, 1.29 feet, site and datum then in use.)

Maximum stage known, 24.6 feet July 1919, site and datum then in use (discharge, about 25,200 million gallons per day).

Remarks.- Records good. Discharge for days of rapidly changing stage computed by using rate of change of stage as a factor. No regulation. Automatic recorder installed November 25, 1934; chain gage prior to this time.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1930			1770	1505	672	1415	756	410	368	247	390	820	
1931	1576	904	1034	2610	2261	711	1434	5162	950	305	282	975	1525
1932	2358	2171	2836	1544	911	982	390	256	107	555	1570	3217	1408
1933	3676	4102	2132	2901	1363	473	433	975	743	160	171	182	1425
1934	245	492	1693	3818	995	1957	2442	1499	2623	743	566	4639	1816
1935	3059	1999	2488	3576	1519	618	1275	487	2350	532	1128	1640	1718
1936	7061	6544	4619	6932	901	1379	1414	2392	1017	2822	2024	4802	3483
1937	5094	7326	3373	3799	2998	719	896	1549	2988	668	782	999	2566
1938	1787	1095	1286	2419	699	2154	2799	2731	1957	849	843	1384	1670
1939	2041	6019	6158	2218	1656	1071	2130	3096	3014	676	627	677	2427
1940	1437	2546	2157	2279	1068	1103	531	2196	545	261	904	756	1309
1941	1169	1211	2011	2640	613	574	2744	621	233	146	216	508	1058
1942	505	1043	2318	1169	1308	806	449	1988	1570	4207	1446	2399	1609
1943	3328	3486	2786	2693	1130	1732	2578	525	439	248	337	557	1641
1944	2927	3496	5411	4705	1336	443	585	895	592	2173	650	2278	2122
1945	1901	2446	2724	842	693	495	1812	3785	5729	2543	966	2845	2233

Neuse River at Kinston, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1930			3090	2670	866	2760	1780	711	762	390	576	2200	
1931	2390		2020	5110	4050	2350		7240	2760				7240
1932	5030		7490	2600	1270	2180	1410	615	138	2140	2510	5830	7490
1933	5450	4940	3020	6230	2870	730	558	2340	1760	238	209	238	6230
1934	362	704	2550	6910	2510	3440	3880	3070	4430	1870	1280	11800	11800
1935	4420	3150	3880	4650	3240	1030	3820	963	5590	1140	2380	3550	5590
1936	11600	10600	7110	15500	1710	3620	3090	6010	2280	4620	4550	9560	15500
1937	7360	13700	4960	6340	7360	1160	2890	4310	7170	969	1470	1540	13700
1938	3270	1430	2330	4840	1430	5190	6100	7620	6300	1770	1940	2690	7620
1939	3120	9950	10900	3610	3220	2290	4840	7880	7880	1320	937	1580	10900
1940	2420	3970	4210	4030	2330	2350	1170	7040	1100	354	2480	1760	7040
1941	1650	2190	4090	4150	1800	975	6380	853	437	224	451	1090	6380
1942	7110	2580	3730	2160	2470	2270	988	4090	4320	8660	2910	3570	8660
1943	6430	5030	4210	4260	1760	4560	4560	943	853	390	577	2110	6430
1944	5000	5700	8790	7430	3200	840	2010	2690	2090	5410	963	4150	8790
1945	3160	4750	5240	1710	1300	879	4380	5310	16500	13000	1250	4520	16500

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1930			1190	891	490	469	429	284	234	187	284	390	
1931			631	1340	1070	391	315		353	244			244
1932				827	615	452	163	146	81	93	504	1040	81
1933	2110	2920	1410	1200	730	319	298	384	257	112	129	138	112
1934	181	340	643	1370	478	885	975	558	1040	406	406	1640	181
1935	1830	1420	1600	1720	866	356	317	317	659	326	355	775	317
1936	1100	2920	2470	1870	514	426	499	484	441	1200	833	1230	426
1937	2550	4130	2140	1870	659	426	441	612	517	484	526	711	426
1938	937	840	808	788	470	969	775	517	406	526	517	872	406
1939	1160	3120	2020	1200	711	526	526	872	565	415	481	516	415
1940	808	1130	1260	1100	659	578	239	225	299	227	239	514	225
1941	827	879	943	911	269	278	475	320	152	110	171	192	110
1942	411	594	859	479	492	313	235	411	411	424	943	1670	235
1943	1780	1430	1320	1470	736	523	605	288	227	196	258	309	196
1944	1390	963	2280	2540	646	256	229	256	288	632	550	1040	188
1945	1140	943	975	523	486	344	367	1510	1140	808	743	827	344

Neuse River at Kinston, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
Jan. 7		1700	1290	5030	219	3060	2430	3020	1070	2520	1140	1340	607
14		1380	2330	2690	239	3770	7430	5970	2430	1320	1040	1070	523
21		2020	4550	3670	210	2250	10100	6150	2170	1950	1990	1030	428
28		1420	1600	3180	280	2830	7950	4770	1430	2110	1620	1180	443
Feb. 4		963	1890	4250	360	2890	5720	7880	1600	3010	1250	1210	599
11		775	2710	3070	447	1600	4210	11800	1210	3880	1670	950	640
18		840	2260	4390	465	1910	6590	5760	1030	5570	3680	1300	698
25		1100	1810	4780	590	2530	9240	4570	898	9370	2750	1540	1960
Mar. 4	1730	866	1490	3080	1000	2220	6200	4640	1090	7620	2470	1010	1030
11	1920	904	2030	2030	1400	2250	2680	4040	930	10100	1650	1950	2050
18	2270	801	5850	1840	1580	2270	4170	2880	1830	7240	1830	3580	3310
25	1500	814	2430	2470	1890	2510	5390	3320	1580	3840	3610	1340	2140
Apr. 1	1350	1820	1900	1860	2270	3030	6650	2290	853	2180	1710	1880	2540
8	1380	2270	2200	1240	2890	4370	5150	2390	1040	2620	1820	3880	1560
15	2060	4350	1600	1640	2460	4480	11600	5700	4140	2170	1500	3640	1380
22	1350	2470	1420	3180	5720	2560	9370	3680	2880	1980	2380	1500	1100
29	1370	1650	930	5730	4700	2800	2460	3350	2030	2270	3330	1550	600
May 6	801	1250	1070	1850	1080	2090	1520	6980	820	1940	1590	1300	614
13	623	2180	801	2290	639	975	1020	4460	519	2780	840	691	1430
20	736	2640	988	1070	847	982	769	1450	743	1230	736	486	1180
27	659	1960	801	853	1640	2090	640	898	565	814	924	377	2090
June 3	533	2840	1150	730	938	1490	508	659	1090	1150	1910	280	788
10	685	769	559	525	1750	795	563	736	1490	1780	1380	646	366
17	2390	571	937	463	2510	547	950	788	1500	1010	730	659	1560
24	1930	629	1510	381	2070	586	1520	827	1910	891	1180	536	833
July 1	904	470	665	427	1660	391	2860	634	4630	570	704	620	517
8	595	659	859	463	2770	396	1680	885	5270	730	505	775	334
15	466	1740	335	357	2170	827	840	762	1000	2460	549	2530	360
22	969	1360	225	497	1980	3000	698	636	995	1020	820	4500	3550
29	1060	1940	172	394	2960	1060	2420	749	2920	3860	326	3970	611
Aug. 5	583	1830	174	474	2640	704	3270	1870	5910	4260	256	814	724
12	406	3970	393	1650	1510	468	5100	1250	5450	1290	376	643	678
19	342	6720	305	788	951	358	1470	1460	937	1090	1760	422	2480
26	433	6850	205	808	744	551	601	859	609	3490	5980	610	3450
Sept. 2	287	4690	147	963	2570	605	1190	3660	711	7110	1730	627	1990
9	280	1250	119	672	2080	1820	975	6520	724	6980	736	310	1310
16	521	1050	101	1030	1980	5050	1100	3310	488	2330	558	235	3640
23	406	704	98	930	3770	2170	756	917	2330	736	432	178	1060
30	291	457	103	302	2440	808	924	563	4660	636	311	158	478
Oct. 7	258	382	132	216	1290	911	3020	512	1330	1100	280	185	652
14	202	308	231	163	802	536	2470	698	859	717	292	143	2180
21	279	304	642	143	564	412	4210	630	579	521	244	121	7170
28	237	249	1190	123	460	349	2260	801	659	454	241	116	7300
Nov. 4	309	280	589	141	427	398	1160	685	685	515	245	278	2660
11	453	271	1550	152	568	736	1170	545	614	590	345	222	1360
18	400	284	1720	171	517	1720	3130	1010	609	504	717	189	1260
25	377	278	1810	195	469	1510	2670	853	1010	730	2060	180	981
Dec. 2	370	280	2060	176	1320	853	1470	872	1400	724	840	196	1980
9	478	969	1520	177	6910	885	1510	1110	1160	565	645	393	1780
16	711	1130	1740	172	7750	1410	4020	885	1820	524	537	464	3150
23	762	833	5040	198	2070	3150	8090	769	1050	519	736	443	2420
31	1380	1140	4570	190	2710	1390	6370	1190	1520	1060	1050	782	2240
Maximum		6850	5846	5030	7750	5050	11600	11800	5910	10100	5980	4500	7300
Minimum		249	98	123	210	349	508	512	488	454	241	116	428

Neuse River near Northside, N. C.

ion.- Water-stage recorder, lat. 36°02'25", long. 78°45'05", at Fish Dam Bridge, 1½ miles downstream from Seaboard Railway bridge and 2 miles south of Northside, Granville County. Datum of gage is 226.32 feet above mean sea level (levels by Corps of Engineers, U. S. Army).

age area.- 526 square miles.

ds available.- July 1927 to date.

ge discharge.- 18 years, 352 million gallons per day

mes.- 1927-45: Maximum discharge, 17,184 million gallons per day Oct. 3, 1929 (gage height, 28.64 feet), from rating curve extended above 5,168 million gallons per day; minimum, 2.0 million gallons per day Sept. 20, 1932 (gage height, 0.87 foot).

ks.- Discharge for periods of changing stage computed by using rate of change of state as a factor. Slight diurnal fluctuation caused by power plants above station. Low flow slightly regulated by Durham Reservoir. For diversion, see "Flat River at Dam near Bahama." Automatic recorder installed May 30, 1928; staff and chain gage prior to this date.

Mean Discharge in Million Gallons per day

January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
201	459	368	788	277	243	70.4	148	126	191	22.7	589	
72.4	518	1298	423	342	386	372	154	1079	140	72.4	60.1	323
389	498	212	207	129	151	264	55.4	95.0	1531	443	380	514
								30.6	14.9	32.4	164	177
211	107	185	672	525	132	136	641	58.0	26.1	16.1	84.0	234
601	362	659	304	104	98.2	27.5	19.9	4.82	149	435	814	302
503	496	242	486	180	74.3	51.1	74.3	17.1	6.43	5.74	12.5	177
11.6	111	457	943	335	494	158	160	623	96.9	324	784	375
516	365	591	1024	303	84.0	182	25.5	211	51.9	194	285	318
1730	1250	976	1390	131	148	246	281	94.3	167	73.6	452	576
1542	640	413	885	252	194	135	767	395	197	180	154	479
521	220	364	317	107	791	1583	255	54.4	61.4	178	360	403
449	1302	934	530	476	203	438	1238	197	86.6	73.0	110	499
217	745	430	424	399	278	82.0	431	76.2	25.4	461	203	312
309	207	419	387	75.6	91.7	80.1	11.8	9.5	5.12	5.28	18.0	134
11.6	15.8	353	89.1	400	84.0	114	360	191	462	360	644	271
778	618	638	488	154	118	158	18.0	18.5	7.36	12.4	28.4	245
286	628	955	793	193	46.4	189	106	565	843	358	483	453
395	885	346	203	145	80.8	863	326	2141	153	117	872	540

Neuse River at Kinston, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1943	1944	1945										
Jan. 7	2870	2240	1720										
14	2670	3060	2570										
21	2040	3180	2110										
28	4490	3840	1510										
Feb. 4	5320	1310	1100										
11	4610	1340	1150										
18	4130	4050	2010										
25	1870	5210	4040										
Mar. 4	1410	4880	4900										
11	2270	3230	4200										
18	3620	5480	2360										
25	2350	5960	1620										
Apr. 1	3910	8010	1120										
8	3050	5030	782										
15	1630	3250	595										
22	2210	5690	659										
29	3710	4650	1200										
May 6	1450	2290	1070										
13	911	1800	632										
20	995	1010	546										
27	1140	698	691										
June 3	1270	911	698										
10	601	548	492										
17	3540	428	472										
24	2510	361	372										
July 1	846	284	516										
8	1850	260	411										
15	3570	270	466										
22	4320	1380	1860										
29	1320	534	3980										
Aug. 5	782	1280	3910										
12	448	1670	4430										
19	577	629	2160										
26	485	306	3940										
Sept. 2	540	258	4350										
9	454	214	1710										
16	270	210	2240										
23	284	404	4850										
30	632	1630	15000										
Oct. 7	310	2130	7240										
14	237	4550	1710										
21	211	808	1030										
28	212	1720	904										
Nov. 4	291	801	859										
11	273	589	1030										
18	457	624	1070										
25	334	643	982										
Dec. 2	308	1130	846										
9	351	3310	1770										
16	382	3110	4150										
23	357	1800	3140										
31	1130	1120	2880										
Maximum	5320	8010	15000										
Minimum	211	210	372										

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1927								541	512	924	323	2040	
1928	457	1380	1460	6460	1400	1390	240	1050	8080	414	112	80.1	8080
1929	173	4200	6650	2080	1030	1800	1980	1130	204	16000	1410	1210	16000
1930	1200	2020	519	711	426	943	1870	147	96	40	152	872	2020
1931	516	163	528	3390	2660	486	1010	2150	132	63	24	302	3390
1932	4150	872	4730	827	251	344	61	98	21	1590	1690	2770	4730
1933	1160	1150	364	2150	313	152	333	388	32	19	21	27	2150
1934	21	1210	1670	6380	2380	1380	801	956	3023	184	5230	4690	6380
1935	1670	646	2300	3350	930	121	937	49	1690	173	775	1850	3350
1936	6370	7300	5580	7620	233	474	1960	1630	442	879	281	1650	7620
1937	3590	1500	756	3880	612	652	606	3060	1780	659	775	331	3880
1938	2300	528	1420	1350	425	4640	12900	594	324	107	1030	1290	12900
1939	1940	5300	2330	2070	2970	840	1940	6460	711	344	156	577	6460
1940	840	2330	1680	1550	2710	1230	232	2450	248	32	3100	749	3100
1941	1000	853	1820	1250	150	289	346	30	23	6.1	14	39	1820
1942	22	1490	1780	264	2510	333	299	1700	1510	3000	2730	3000	3000
1943	2660	2860	2450	2850	500	459	885	36	52	14	36	147	2860
1944	1770	2890	2490	3860	982	99	1740	930	4260	9820	2800	2520	9820
1945	1440	2600	937	788	460	358	4800	1170	18600	366	183	3310	18600

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1927								28	45	21	19	32	
1928	116	299	111	137	116	65	24	18	58	78	58	41	18
1929	37	58	335	127	112	89	85	75	59	92	107	158	37
1930	127	271	136	96	68	59	21	13	8.4	7.1	13	17	7.1
1931	102	80	85	251	185	52	35	112	15	9.7	9.0	11	9.0
1932	108	142	120	116	65	33	10	6.5	2.0	3.6	152	209	2.0
1933	313	292	116	127	61	30	12	19	7.2	4.1	3.8	4.3	3.8
1934	6.5	12	118	183	63	104	45	47	65	65	56	190	6.5
1935	271	211	216	335	130	27	30	11	18	12	47	85	11
1936	152	357	233	281	74	23	25	47	22	54	43	43	22
1937	463	421	227	173	96	92	40	90	98	49	107	102	40
1938	163	158	169	120	47	55	235	97	16	39	29	114	16
1939	191	459	331	192	125	67	74	108	71	46	52	60	46
1940	77	187	237	158	99	105	22	20	27	12	19	81	12
1941	150	119	103	136	34	36	19	7.1	5.9	3.7	3.9	5.5	3.7
1942	7.8	14	55	25	25	23	37	38	26	30	65	264	7.8
1943	167	193	193	158	52	36	32	8.4	8.4	4.5	5.2	7.8	4.5
1944	28	33	154	232	79	19	12	19	14	104	63	155	12
1945	163	125	142	69	68	31	47	105	87	68	75	90	31

Mean Weekly Discharge in Million Gallons per day

Week Ending	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Jan. 7		241	44	252	235	187	389	15	775	2780	2510	465	313
14		183	90	145	216	1720	611	11	391	1780	716	877	282
21		157	75	697	285	312	538	11	342	2030	1660	360	477
28		244	70	476	150	252	528	11	625	865	1010	457	477
Feb. 4		307	79	548	98	467	339	25	322	504	1390	317	897
11		613	176	833	90	448	402	23	261	1130	645	189	1850
18		402	329	347	109	348	717	23	462	3480	516	170	1700
25		452	541	292	134	302	518	37	358	557	729	235	555
Mar. 4		280	2780	266	118	171	355	554	381	398	506	232	1780
11		233	2270	317	169	1740	286	476	287	436	458	398	717
18		417	723	162	106	338	240	212	730	1410	400	640	1140
25		578	600	184	232	317	239	353	413	924	392	288	463
Apr. 1		290	391	146	302	550	138	865	1300	917	302	179	988
8		150	292	308	1520	376	256	392	1430	3400	1040	248	716
15		564	168	242	517	367	278	2240	1050	1710	487	652	416
22		368	859	198	311	246	1030	1010	813	410	359	221	407
29		1920	372	107	405	174	360	282	755	348	1700	195	354
May 6		859	384	107	273	154	193	119	313	202	549	97	1410
13		277	501	94	492	92	228	81	248	141	288	55	327
20		139	162	204	241	82	216	846	224	115	213	114	180
27		195	381	134	1200	74	139	166	515	114	150	147	181
June 3		132	210	81	260	106	113	522	137	67	132	110	280
10		652	393	91	136	67	73	1000	105	46	290	264	274
17		188	280	78	84	110	77	344	83	165	228	292	174
24		86	175	379	173	131	63	393	72	270	151	2050	152
July 1		81	813	73	74	92	52	166	55	141	116	807	114
8		53	342	100	122	43	30	140	106	107	280	389	652
15		128	736	127	62	33	104	118	307	51	148	456	368
22		74	346	690	70	17	25	93	268	214	78	391	211
29		40	132	193	316	13	52	130	105	310	63	5450	522
Aug. 5	251	23	147	103	392	23	141	322	35	690	328	652	305
12	82	67	400	59	593	38	109	97	31	240	368	380	180
19	34	360	189	56	1100	17	39	67	15	113	632	170	1390
26	150	146	340	49	600	9.7	30	91	28	92	1170	128	1720
Sept. 2	221	113	270	25	204	9.0	25	358	22	536	1170	88	2220
9	261	1290	81	26	79	5.7	20	664	494	88	891	35	310
16	81	213	88	39	70	2.6	19	671	166	112	305	23	158
23	80	2710	95	34	49	2.4	15	1070	68	125	131	112	118
30	53	394	89	30	18	7.7	12	233	167	42	110	48	81
Oct. 7	86	224	6190	19	27	26	5.7	117	74	262	186	90	167
14	493	172	289	9.0	12	27	5.7	119	62	208	181	66	72
21	197	94	113	20	13	494	6.5	81	27	177	238	43	66
28	59	93	149	8.4	40	76	8.4	77	19	67	200	52	55
Nov. 4	28	88	238	23	29	206	4.2	83	83	56	139	50	65
11	52	76	543	54	14	477	4.8	101	181	59	116	59	65
18	81	66	381	24	17	218	8.4	63	372	129	327	32	55
25	92	71	311	32	19	393	6.0	62	140	61	146	463	103
Dec. 2	44	65	580	21	14	691	4.8	3040	146	49	147	216	66
9	1150	70	658	121	36	234	9.0	982	120	276	130	442	66
16	479	68	316	44	97	904	15	310	697	839	123	367	66
23	672	60	267	113	118	497	14	525	252	568	118	139	68
31	249	43	293	386	103	1630	14	313	132	268	236	528	234
Maximum		2710	6190	833	1520	1740	1030	3040	1430	3480	2510	4530	2220
Minimum		23	44	8.4	12	2.4	4.2	11	15	42	63	23	55

Mean Weekly Discharge in Million Gallons per day

Week Ending	1940	1941	1942	1943	1944	1945						
Jan. 7	107	366	12	659	372	458						
14	198	195	8.4	331	74	636						
21	383	452	9.7	1130	652	349						
28	190	264	16	590	134	227						
Feb. 4	204	190	16	1070	67	157						
11	1210	147	43	1400	190	160						
18	637	345	344	420	1250	1330						
25	872	171	210	239	950	1760						
Mar. 4	429	136	179	200	257	538						
11	398	620	723	1080	685	592						
18	678	296	248	371	1110	251						
25	296	188	196	600	1420	223						
Apr. 1	326	762	276	711	1030	163						
8	196	781	138	244	413	109						
15	500	372	122	307	1540	89						
22	633	170	50	1120	827	346						
29	408	232	31	335	456	284						
May 6	186	114	182	194	174	132						
13	184	90	152	128	383	87						
20	161	74	96	109	111	215						
27	949	50	420	200	133	127						
June 3	502	87	83	122	122	140						
10	212	92	68	166	64	57						
17	178	135	151	140	49	53						
24	505	58	70	106	30	152						
July 1	122	59	55	60	26	58						
8	95	97	170	222	18	96						
15	124	136	166	328	105	174						
22	79	70	61	83	475	2550						
29	40	37	78	44	160	917						
Aug. 5	31	22	72	32	377	242						
12	25	12	471	21	90	269						
19	1250	7.8	527	14	31	457						
26	363	7.8	483	11	28	433						
Sept. 2	303	12	87	23	27	146						
9	99	10	484	15	19	189						
16	87	13	118	21	55	556						
23	48	8.4	48	22	1500	8080						
30	34	7.8	139	16	840	338						
Oct. 7	29	5.7	76	7.8	2610	207						
14	25	5.0	152	8.4	170	165						
21	23	4.9	1270	5.6	433	131						
28	22	4.5	421	7.8	457	130						
Nov. 4	55	5.0	253	7.8	142	109						
11	32	6.4	117	18	115	110						
18	1450	4.4	96	14	109	113						
25	313	5.1	646	9.7	105	129						
Dec. 2	164	5.8	672	9.7	1670	116						
9	94	17	711	14	665	930						
16	114	32	512	12	461	316						
23	192	12	493	9.7	229	277						
31	413	14	904	75	209	2020						
Maximum	1450	781	1270	1130	2610	8080						
Minimum	22	4.4	8.4	5.6	18	53						



CLIMATOLOGICAL

The United States Weather Bureau at the present time is operating eleven rainfall stations, eight of which also give temperature, in the Neuse River. Only four of these records are published in this bulletin as a very good conception of the whole basin can be obtained from these records. Daily records of all stations in this river basin are available in the office of the U. S. Weather Bureau, Raleigh, North Carolina, and in the office of the Division of Water Resources and Engineering of the Department of Conservation and Development.

Climatic conditions over the Neuse River Basin are such that most of the precipitation occurs as rain. The small amount of snow that falls is soon melted and none remains to cause spring freshets. A sufficient quantity of ice does not form to have any appreciable effect on stream run-off. Evaporation is extremely high during the summer months.

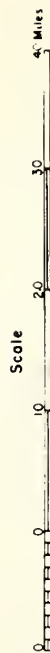
Severe droughts have occurred in recent years in the Neuse River Basin in 1921, 1925, 1926, and 1932. The rainfall of 1921 was less than that of 1925, but the effect of the 1921 drought on the streams was not so pronounced as 1925. Due to the fact that the 1925 drought was over a much longer period and thus drew more on the ground water storage it caused the streams to reach lower levels than in 1921.

Neuse River Basin is frequently subject to heavy rainfall on account of its proximity to the ocean. Severe storms may occur during any month on this area, but are most frequent in the early spring, summer, and early fall. In general they are caused by local disturbances or by West Indian hurricanes.

The Neuse River Basin has only one evaporation station located on Lake Michie near Bahama. This station has been operating since August 1927 and has a complete record, except for a few scattered months when the pan was out of order. The station consists of a 48-inch metal pan mounted on a raft and floating in the Lake.

N. C. DEPT. OF CONSERVATION AND DEVELOPMENT
DIVISION OF WATER RESOURCES AND ENGINEERING

MAP OF
NEUSE RIVER BASIN
SHOWING
MEAN ANNUAL RAINFALL ISOHYETALS



LEGEND

COUNTY LINE

RAINFALL STATION

RAINFALL STATIONS
IN NEUSE RIVER BASIN

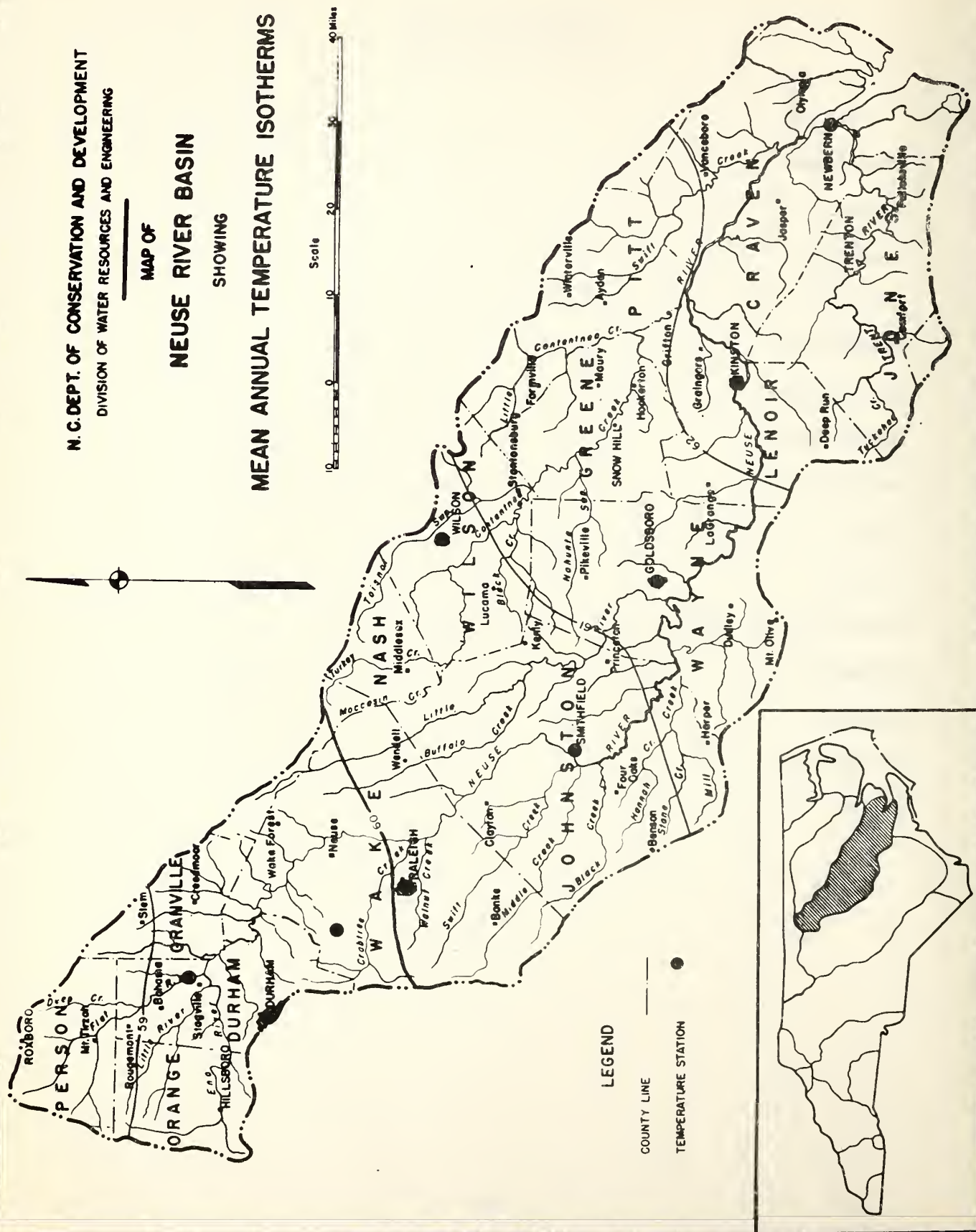
Location	Length of Record
Deep Creek	18
Durham	36
Goldsboro	75
Kinston	42
Lake Michie	18
Lake Raleigh	19
Mangum Store	18
New Bern	63
Neuse	34
Raleigh	74
Raleigh-Durham Airport	1
Rougemont	18
Roxboro	32
Smithfield	55
Wilson	8

MAP OF

NEUSE RIVER BASIN

SHOWING

MEAN ANNUAL TEMPERATURE ISOTHERMS



TEMPERATURE STATIONS
IN NEUSE RIVER BASIN

Location	Length of Record
Durham	36
Goldsboro	75
Kinston	42
Lake Michie	18
New Bern	63
Raleigh	74
Raleigh-Durham Airport	1
Smithfield	55
Wilson	8

Precipitation at Goldsboro, Wayne County, North Carolina:
Monthly and annual amounts (in inches and hundredths)

Goldsboro, Wayne County.- Elevation, 102 feet

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1867	5.02	0.62	9.36	4.29	6.86	11.15	9.00	9.78	8.74	4.75	2.15	2.75	74.47
1868	3.20	2.25	3.35	5.25	4.22	4.15	----	3.25	.92	5.00	1.60	1.33	-----
1869	3.60	3.25	2.95	1.37	4.22	6.00	4.42	3.75	1.35	3.35	3.15	4.95	42.36
1870	3.00	4.60	2.30	3.15	4.85	7.95	12.25	6.95	2.85	5.00	2.00	3.70	58.60
1871	1.70	4.90	4.26	5.48	-----	-----	-----	-----	-----	-----	-----	-----	-----
1872	1.01	5.40	4.95	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1873	1.25	3.60	-----	-----	-----	-----	-----	10.82	6.55	2.30	4.47	4.05	-----
1874	-----	4.35	3.54	6.17	4.80	2.95	5.25	4.27	5.12	1.87	-----	3.90	-----
1875	4.40	3.45	7.71	4.75	6.25	6.10	5.25	11.45	4.19	2.43	4.80	3.65	64.43
1876	.79	4.40	4.25	3.50	6.00	7.07	6.48	11.61	12.60	2.08	1.38	2.45	62.61
1877	2.82	2.12	8.82	7.95	3.80	5.88	3.72	5.95	16.70	3.60	3.75	5.90	71.01
1878	5.05	2.25	.95	6.35	7.50	8.05	-----	-----	-----	-----	-----	-----	-----
1883	-----	-----	-----	4.54	2.66	5.36	7.43	6.26	10.39	3.99	-----	-----	-----
1884	-----	-----	-----	2.75	2.94	6.21	3.98	4.28	2.53	.88	-----	-----	-----
1885	-----	-----	-----	-----	5.87	5.31	5.25	4.67	2.70	3.20	-----	-----	-----
1886	-----	-----	-----	2.54	4.63	4.75	6.91	14.25	3.35	.35	-----	2.87	-----
1887	-----	3.52	-----	-----	7.83	5.73	6.42	14.36	2.25	5.45	-----	-----	-----
1888	-----	-----	-----	.55	7.67	2.10	1.80	1.65	13.10	3.55	-----	-----	-----
1889	-----	-----	-----	-----	4.70	7.82	7.30	3.83	3.30	2.80	3.05	.50	-----
1890	1.00	3.10	2.90	2.50	2.79	2.22	6.59	8.38	4.17	2.10	.56	3.60	39.91
1891	4.10	4.30	6.90	1.90	4.93	1.77	5.84	10.78	2.35	3.43	1.51	1.65	49.46
1892	5.50	3.90	3.00	3.40	3.51	6.82	5.05	4.85	3.76	.73	1.85	2.90	45.27
1893	2.80	4.10	2.90	1.33	5.04	6.23	5.84	5.86	3.21	4.46	2.27	3.60	47.64
1894	4.50	4.40	2.10	1.60	3.32	1.07	7.20	9.05	6.06	7.00	.91	2.30	49.51
1895	6.40	2.50	5.20	8.86	4.11	2.92	3.22	7.71	3.96	1.40	3.40	3.10	52.78
1896	2.80	5.70	2.40	1.90	4.89	3.78	5.06	2.00	4.38	1.79	2.51	4.50	41.71
1897	1.50	7.00	7.10	3.70	4.13	3.73	9.52	6.70	.85	3.44	2.70	1.80	52.17
1898	1.60	.80	3.00	4.50	3.36	2.53	1.97	9.32	2.07	4.42	4.70	3.80	42.07
1899	3.80	8.70	5.70	4.00	4.36	2.41	9.45	5.37	3.31	4.36	1.34	2.88	55.68
1900	2.51	4.54	3.87	4.44	3.46	2.69	6.86	5.14	3.88	1.06	5.76	4.22	48.43
1901	2.65	1.79	2.21	3.29	6.79	4.42	8.45	7.52	6.83	1.96	1.25	5.41	52.57
1902	2.31	5.72	3.91	2.69	1.13	4.17	3.95	4.97	3.57	4.48	2.81	2.98	42.69
1903	2.57	5.76	5.89	3.64	.96	6.97	3.59	4.40	2.01	4.28	.52	1.61	41.30
1904	2.60	4.63	3.96	1.09	3.47	5.00	6.23	7.32	4.59	2.09	3.02	3.41	47.41
1905	1.99	5.91	2.22	5.34	5.64	2.54	10.89	9.02	2.46	2.45	.75	5.13	54.34
1906	3.53	4.83	6.00	.52	4.55	8.47	12.67	6.07	2.43	3.99	.73	4.00	57.79
1907	1.46	3.55	1.85	3.98	4.72	6.15	5.50	2.75	2.85	.78	4.18	3.70	41.47
1908	3.72	5.43	6.98	2.68	2.69	4.46	11.34	9.47	1.09	3.12	1.15	3.00	55.13
1909	1.50	4.50	2.04	3.23	5.20	5.44	9.79	4.08	2.26	1.13	.45	1.90	41.52
1910	3.19	5.33	3.35	4.49	6.56	6.37	5.67	8.20	5.60	2.36	.03	2.60	53.75
1911	4.59	1.29	3.43	2.46	.57	2.20	2.82	3.53	2.65	3.53	4.44	3.31	34.82
1912	4.47	3.55	4.22	4.12	2.72	7.25	4.17	5.99	4.31	.46	1.79	2.48	45.53
1913	3.65	3.27	4.68	1.01	6.63	8.53	8.99	1.97	6.39	3.82	1.18	3.36	53.48
1914	2.75	5.78	3.69	2.98	2.03	2.33	5.20	6.19	6.71	3.54	2.95	4.73	48.88
1915	6.43	2.82	2.21	2.41	8.34	3.78	5.71	4.21	4.04	4.44	1.81	2.28	48.48
1916	2.86	3.35	2.38	2.04	4.96	6.02	6.95	3.92	3.69	2.51	1.06	2.90	42.64
1917	3.67	2.91	3.54	3.24	4.67	7.69	7.77	3.49	15.66	1.48	1.45	1.80	57.37
1918	2.95	.97	1.96	8.05	4.74	2.55	5.14	2.42	5.47	1.61	3.43	5.47	44.76
1919	5.24	4.66	1.86	1.81	7.29	6.10	11.26	3.43	3.49	3.19	.29	1.32	49.94

Precipitation in Goldsboro, Wayne County, North Carolina:
Monthly and annual amounts (in inches and hundreths)

Goldsboro, Wayne County,- Elevation, 102 feet

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1920	2.57	5.40	6.66	6.61	.53	6.16	9.32	5.16	4.15	1.37	4.57	5.43	57.93
1921	3.47	4.85	3.95	5.74	9.95	3.81	5.82	2.73	2.17	2.48	3.50	2.27	50.74
1922	4.71	7.99	5.94	4.86	7.70	11.41	7.58	5.19	.92	4.91	.40	4.57	66.18
1923	2.81	2.37	3.42	6.08	2.68	1.73	5.58	4.27	1.07	1.86	3.75	4.51	40.13
1924	4.39	5.86	2.46	3.71	7.04	5.42	5.72	4.58	14.16	.81	1.43	5.54	61.12
1925	6.58	3.65	2.38	2.17	4.20	4.04	4.50	2.50	2.96	2.71	3.58	2.52	41.79
1926	4.10	5.20	4.08	2.21	1.50	5.32	2.69	5.56	.68	.32	2.95	1.71	36.32
1927	.79	3.90	3.95	1.69	1.20	7.27	5.42	3.41	4.20	4.32	3.47	2.71	42.33
1928	.73	3.53	2.38	6.28	4.56	3.98	6.78	4.00	14.23	3.00	2.08	3.70	55.25
1929	4.79	6.48	4.73	2.80	7.26	3.93	7.61	5.78	5.41	8.37	4.84	4.06	66.06
1930	5.38	1.63	2.59	2.13	2.09	4.10	3.85	2.84	1.35	2.01	1.52	4.46	33.95
1931	2.09	1.36	3.49	4.63	4.85	3.85	6.91	11.05	2.16	2.86	0.35	5.84	49.44
1932	2.75	2.65	2.79	1.21	8.41	2.15	2.50	3.04	1.70	5.94	5.68	5.38	44.20
1933	3.88	4.06	2.55	6.13	7.10	1.81	7.22	7.38	1.67	0.01	0.89	0.88	43.58
1934	1.17	4.00	5.09	3.00	2.89	5.27	14.51	2.97	6.44	0.92	3.88	2.82	52.96
1935	4.42	2.28	3.19	3.31	2.26	4.05	10.07	5.87	6.65	0.31	3.16	4.76	50.33
1936	4.50	3.90	5.82	4.08	1.26	8.33	12.76	3.03	4.83	5.53	4.11	3.99	62.14
1937	6.29	5.22	2.09	9.83	0.91	3.77	6.86	8.06	1.24	2.31	4.45	2.17	53.20
1938	2.29	1.01	1.97	7.95	3.36	6.39	5.30	2.68	12.80	2.20	1.95	3.10	51.00
1939	4.40	7.05	4.27	2.43	3.90	3.32	11.53	4.30	1.70	3.78	3.70	1.76	52.14
1940	2.63	2.10	2.77	2.72	3.59	5.65	2.79	6.25	1.29	1.89	3.98	2.39	38.05
1941	3.22	3.19	5.28	3.51	0.91	8.22	9.32	3.15	0.90	1.93	0.60	2.89	43.12
1942	2.26	2.35	8.80	1.44	2.28	5.30	8.98	8.53	2.67	12.14	0.96	2.81	58.52
1943	5.56	0.98	6.58	3.51	4.67	3.33	6.81	4.01	2.33	1.16	0.66	5.88	45.48
1944	4.94	6.12	4.52	4.61	4.02	1.88	4.43	5.84	6.79	2.32	4.41	2.92	52.80
1945	2.03	4.14	1.41	1.67	3.44	5.52	9.37	9.53	6.56	1.51	2.87	5.88	53.93

Mean Temperature at Goldsboro

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1901	41.4	37.1	52.0	54.7	69.4	76.8	80.6	79.2	72.3	60.0	44.2	41.5	59.1
1902	41.3	37.9	52.4	56.5	70.4	76.3	80.1	76.4	69.0	62.8	55.2	43.3	60.1
1903	42.5	47.2	58.0	58.0	69.2	72.2	80.2	78.4	70.2	59.2	47.7	37.6	60.0
1904	36.5	38.3	51.7	58.8	68.4	76.3	78.4	77.3	71.3	58.8	48.4	39.0	58.6
1905	38.0	36.0	54.9	61.0	72.3	76.6	79.6	76.5	72.8	61.0	49.5	42.3	60.0
1906	45.2	42.2	47.1	62.3	68.6	76.2	76.8	79.2	75.2	60.4	49.2	42.8	60.4
1907	47.8	38.0	55.2	53.2	67.9	72.9	81.1	77.8	76.2	58.7	47.4	47.6	60.2
1908	41.2	41.2	56.3	65.2	70.2	76.4	79.9	77.1	70.3	61.4	54.0	48.6	61.8
1909	44.4	50.5	50.0	62.1	69.3	79.6	77.0	76.6	69.7	57.4	54.8	40.0	61.0
1910	44.0	44.6	59.0	61.6	68.0	74.8	80.4	78.2	72.9	64.2	45.6	37.2	60.9
1911	46.6	45.3	48.7	55.8	69.8	77.6	78.6	78.8	76.3	63.4	50.6	46.0	61.5
1912	34.4	36.7	49.6	61.3	68.8	73.4	77.4	75.8	73.8	60.6	48.6	45.0	58.8
1913	51.9	44.2	54.4	58.7	68.5	73.9	79.8	75.7	68.7	59.7	48.1	43.3	60.6
1914	-----	-----	-----	-----	70.2	79.0	79.4	80.0	69.8	63.6	49.7	40.9	-----
1915	43.4	46.0	43.3	62.0	70.6	75.2	80.6	79.2	75.6	64.4	52.6	40.5	61.1
1916	47.6	44.3	49.5	59.2	72.7	75.0	78.8	79.1	70.8	63.3	53.0	43.4	61.4
1917	45.6	42.4	51.0	62.6	65.5	76.8	80.0	78.2	69.0	58.1	47.0	33.6	59.2
1918	33.0	47.6	55.7	58.4	73.4	75.6	76.6	81.0	68.9	66.8	52.0	49.3	61.5
1919	49.6	47.0	55.7	62.3	72.0	75.4	80.1	79.1	74.2	74.2	56.8	46.7	64.4
1920	40.6	40.2	54.4	61.0	65.8	77.3	78.4	78.4	75.1	64.4	52.2	44.0	61.0
1921	43.6	47.0	61.4	63.6	67.1	77.8	81.0	78.6	80.0	62.2	55.6	45.3	63.6
1922	39.8	48.2	54.3	62.8	70.7	78.2	80.6	76.2	74.5	63.7	52.3	49.4	62.6
1923	47.6	43.0	56.5	61.4	69.4	79.8	79.5	79.4	75.8	61.2	51.5	51.8	63.1
1924	43.6	42.9	50.8	60.6	69.2	78.4	78.2	79.3	69.4	60.8	53.4	46.3	61.1
1925	-----	52.2	56.4	64.4	66.6	79.4	80.8	78.4	79.6	62.2	-----	-----	-----
1926	42.8	48.6	47.2	59.0	69.0	75.6	80.8	81.6	76.5	63.6	49.4	45.8	61.7
1927	41.2	54.5	53.8	61.1	71.4	74.2	78.1	75.9	74.2	64.7	56.2	46.5	62.6
1928	45.6	46.7	52.4	58.6	66.5	77.9	80.8	80.2	69.9	64.0	52.7	44.7	61.7
1929	45.6	43.1	57.4	64.3	69.4	74.5	78.0	77.2	72.7	61.3	54.9	46.7	62.0
1930	45.6	50.2	50.9	63.0	72.7	76.4	82.6	77.6	79.0	60.5	51.2	42.0	62.6
1931	43.6	48.2	48.0	59.9	69.2	77.0	83.0	78.4	77.2	64.3	58.0	53.4	63.4
1932	54.3	52.8	50.7	61.7	69.4	78.6	84.0	80.2	74.4	64.2	51.4	49.6	64.3
1933	51.4	49.2	54.6	62.6	75.2	79.0	79.4	79.4	78.6	64.3	50.0	49.1	64.4
1934	47.1	36.4	50.2	63.8	69.6	80.2	82.2	80.4	75.8	62.2	55.8	44.8	62.4
1935	44.8	46.8	60.1	59.7	68.7	78.2	79.4	79.0	73.2	63.6	55.4	37.8	62.2
1936	39.7	40.7	56.6	59.2	72.0	76.4	81.4	80.2	75.4	65.2	51.3	45.2	61.9
1937	55.0	45.2	50.8	61.2	69.2	79.2	80.0	79.6	70.8	60.2	49.1	44.0	62.0
1938	42.8	51.2	59.2	63.6	71.2	75.4	78.8	80.8	72.0	60.0	55.4	44.6	62.9
1939	45.0	52.6	56.6	61.8	69.2	80.2	79.0	78.6	75.6	64.5	48.0	44.0	62.9
1940	31.8	46.2	50.6	59.5	69.0	78.8	79.8	79.4	71.4	60.6	52.2	49.4	60.7
1941	41.1	39.0	46.2	63.7	71.0	80.0	82.4	81.1	79.0	72.2	59.4	47.0	63.5
1942	44.2	41.1	56.2	64.3	72.5	80.2	82.6	78.1	75.1	64.9	57.0	42.6	63.2
1943	46.8	44.9	50.5	59.2	70.0	80.0	78.9	78.0	68.8	58.8	49.6	42.4	60.6
1944	43.1	45.8	50.3	61.6	74.6	80.0	78.8	77.0	74.6	61.6	50.6	40.6	61.6
1945	40.6	47.2	60.6	65.9	68.0	77.8	80.2	78.0	78.1	63.3	56.1	41.4	62.2

Highest Temperature at Goldsboro

Year	January	February	March	April	May	June	July	August	September	October	November	December	Highest
1901	76	72	77	74	92	92	95	96	92	82	74	83	96
1902	75	76	79	84	91	94	100	97	92	83	76	70	100
1903	70	71	78	85	93	88	95	96	88	85	78	63	96
1904	69	78	82	87	92	97	95	95	90	86	69	74	97
1905	72	59	83	89	93	96	96	98	91	86	77	68	98
1906	77	72	75	91	94	95	93	92	90	83	79	76	95
1907	78	67	96	87	96	98	101	94	96	84	74	79	101
1908	67	68	87	90	95	100	99	98	89	83	76	76	100
1909	--	76	79	90	92	99	97	98	89	83	87	70	98
1910	72	75	90	90	94	95	98	96	90	86	72	62	98
1911	74	75	78	86	94	98	98	95	90	86	75	69	98
1912	63	74	81	85	91	95	93	94	93	85	77	75	95
1913	78	75	80	86	92	96	97	93	87	84	75	66	97
1914	--	--	--	--	98	100	106	98	95	88	80	73	106
1915	71	74	73	96	96	98	102	99	97	88	82	76	102
1916	77	80	83	91	99	94	94	97	94	89	82	76	99
1917	75	80	82	94	98	97	100	100	92	86	76	69	100
1918	65	81	88	88	98	104	101	102	93	90	82	79	104
1919	73	72	80	91	96	98	101	95	95	93	85	80	101
1920	80	67	84	93	92	102	98	98	95	89	80	70	102
1921	76	76	89	92	95	102	99	100	103	85	83	70	103
1922	80	80	86	94	92	97	100	95	96	93	82	76	100
1923	76	75	86	91	90	101	100	97	95	85	74	76	101
1924	72	75	84	91	93	102	99	99	97	88	83	81	102
1925	71	78	89	98	97	99	101	102	103	95	--	--	103
1926	70	75	82	88	97	102	106	102	96	94	78	70	106
1927	79	82	87	94	99	99	100	99	98	92	82	79	100
1928	85	76	85	82	93	106	99	99	92	89	82	70	106
1929	77	73	90	95	91	96	98	97	94	85	84	77	98
1930	80	85	78	98	96	103	104	101	100	92	78	67	104
1931	75	77	76	87	92	100	102	99	100	93	86	82	102
1932	83	83	85	92	96	100	108	107	105	87	76	81	108
1933	79	76	87	88	97	106	102	97	98	92	85	77	106
1934	79	72	85	92	95	101	100	98	96	87	84	71	101
1935	80	76	91	91	95	100	98	100	95	88	85	70	100
1936	75	80	88	89	96	102	100	98	96	89	81	75	102
1937	82	78	80	90	97	99	103	95	94	91	79	72	103
1938	61	79	89	91	99	94	98	101	94	89	85	72	101
1939	72	81	88	89	98	98	95	97	100	92	77	74	100
1940	63	74	81	87	98	99	105	100	96	88	81	76	105
1941	67	63	74	95	102	98	99	103	101	99	81	75	103
1942	73	67	85	92	96	98	101	101	97	88	83	79	101
1943	80	78	83	92	92	101	99	100	97	88	81	77	101
1944	81	78	87	86	95	104	100	97	100	90	78	78	104
1945	64	80	93	91	93	100	98	95	95	85	84	62	100

Lowest Temperature at Goldsboro

Year	January	February	March	April	May	June	July	August	September	October	November	December	Lowest
1901	23	11	17	39	54	57	65	66	52	36	19	13	11
1902	17	19	22	32	46	55	63	55	47	35	32	16	17
1903	19	20	32	30	47	51	61	64	44	31	17	17	17
1904	4	17	27	30	46	53	64	57	44	36	28	22	4
1905	14	14	27	32	50	51	65	55	46	35	22	19	14
1906	22	17	27	33	38	56	61	69	58	31	24	17	17
1907	17	14	22	28	42	49	56	54	50	32	27	20	14
1908	17	13	24	30	38	54	60	58	46	40	28	26	13
1909	--	17	27	30	40	58	54	56	40	29	23	12	12
1910	15	17	25	33	40	42	58	60	51	27	25	11	11
1911	23	20	24	29	43	54	61	62	56	45	28	23	20
1912	8	2	26	36	47	49	63	54	55	33	21	19	2
1913	29	21	25	34	39	47	59	59	44	29	23	20	20
1914	--	--	--	--	46	57	54	54	42	29	20	16	--
1915	22	21	25	27	50	55	60	61	49	36	25	21	21
1916	17	12	22	31	46	51	61	61	47	38	21	20	12
1917	19	8	25	31	39	53	63	56	46	29	20	2	2
1918	0	18	29	31	40	53	52	56	41	38	30	23	0
1919	18	19	33	28	49	53	50	56	51	45	24	17	17
1920	11	19	19	33	39	53	54	59	51	31	24	23	11
1921	20	25	33	30	42	47	66	55	58	31	26	22	20
1922	18	11	28	34	42	59	61	51	53	37	21	26	11
1923	22	15	25	25	38	53	59	54	46	38	23	26	15
1924	8	21	25	27	44	55	56	55	45	33	25	18	8
1925	28	25	20	36	39	55	60	57	56	30	--	8	8
1926	17	19	14	27	39	52	55	61	55	28	25	14	14
1927	10	27	12	32	43	54	55	54	48	39	25	17	10
1928	10	22	27	30	42	52	59	60	45	34	21	19	10
1929	21	20	23	34	42	46	54	52	45	36	17	13	13
1930	16	21	22	34	44	44	64	54	53	26	17	18	16
1931	17	22	24	31	41	49	64	56	46	32	27	22	17
1932	26	25	17	34	45	51	54	58	47	34	25	22	17
1933	25	16	26	35	48	45	51	60	48	34	17	16	16
1934	8	9	19	33	45	59	67	52	56	29	24	18	8
1935	11	18	24	35	43	51	57	55	46	29	20	12	11
1936	12	5	32	28	42	51	57	56	51	39	20	21	5
1937	35	20	12	31	38	52	59	60	49	32	19	17	17
1938	11	27	24	33	45	46	53	60	43	36	18	22	11
1939	19	20	28	32	37	65	61	57	50	35	22	23	19
1940	8	15	18	28	37	54	56	55	45	29	22	17	8
1941	12	18	21	37	34	61	68	57	55	43	28	--	--
1942	18	18	26	34	47	61	65	53	40	33	24	11	11
1943	23	12	13	27	40	50	57	54	39	28	24	7	7
1944	13	18	25	28	44	55	58	53	49	29	26	17	13
1945	19	11	33	35	43	51	59	54	58	33	25	19	11

Precipitation at Durham, Durham County North Carolina:
Monthly and annual amounts (in inches and hundredths)

Durham, Durham County.--Elevation, 406 feet

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1901	2.10	1.70	5.85	5.68	8.89	2.24	-----	-----	-----	-----	-----	-----	-----
1908	5.00	4.30	5.40	2.70	2.60	4.60	5.60	10.60	2.37	4.37	3.11	4.01	54.86
1909	1.58	3.85	2.49	4.53	2.74	6.17	3.03	9.35	4.12	2.55	.19	2.80	43.40
1910	3.30	2.73	1.80	4.80	3.48	5.88	2.20	7.51	1.78	7.09	.95	4.46	45.98
1911	1.94	2.37	3.57	2.25	1.67	3.00	1.89	8.02	.73	3.26	4.34	4.87	37.91
1912	2.99	2.40	6.08	3.91	5.00	2.97	3.38	.66	2.96	1.12	2.58	2.50	36.55
1913	2.99	1.96	5.59	2.69	2.69	4.32	2.25	3.03	7.33	2.74	2.08	3.17	40.84
1914	2.87	3.94	3.47	1.60	1.01	4.83	5.26	6.71	3.51	3.74	3.67	6.52	47.13
1915	6.00	3.89	1.90	1.90	4.12	3.86	3.19	5.12	1.74	4.27	1.67	2.49	40.15
1916	2.06	3.95	1.75	3.02	2.16	7.50	5.36	4.56	1.89	2.69	1.07	2.88	38.89
1917	3.85	3.07	7.06	2.92	3.15	7.27	6.87	2.32	3.52	2.68	1.45	2.31	46.47
1918	3.72	1.17	3.64	6.61	3.87	3.51	5.46	3.10	3.83	.87	3.19	4.39	43.36
1919	5.66	3.34	2.98	3.15	5.62	1.66	12.12	3.70	.21	2.95	.43	.59	42.41
1920	2.78	2.92	3.11	4.97	2.04	5.00	5.82	9.09	3.46	.80	3.80	4.30	48.09
1921	3.97	2.43	3.31	1.67	3.30	1.62	2.41	.70	1.60	1.28	3.01	4.25	29.55
1922	4.32	4.94	6.63	3.06	5.70	3.71	4.95	2.71	.03	5.25	.32	2.86	44.48
1923	2.95	2.69	5.69	3.59	2.49	1.33	3.60	3.31	4.55	1.18	1.55	2.07	35.00
1924	3.63	2.30	1.81	2.90	5.97	4.41	6.20	4.23	10.54	.97	1.63	2.53	47.12
1925	5.99	1.22	1.25	1.89	2.08	2.47	0.33	3.36	1.91	2.14	1.37	1.45	25.46
1926	3.94	4.40	3.47	2.32	.89	2.12	2.49	1.92	1.36	1.41	2.93	4.08	31.33
1927	1.52	2.86	2.45	3.14	.53	4.79	6.66	4.21	2.33	4.05	1.98	3.86	38.38
1928	1.87	2.57	2.42	5.76	2.30	3.34	5.93	5.26	7.63	1.10	.33	1.14	39.74
1929	1.43	6.46	5.12	3.08	4.48	7.44	4.10	7.90	1.80	6.19	4.53	1.79	54.32
1930	2.94	1.05	1.79	2.01	3.00	5.38	3.69	1.25	2.80	2.60	1.30	3.32	31.13
1931	1.48	1.17	1.88	4.03	4.84	2.09	3.88	7.91	0.18	1.21	0.11	4.91	33.69
1932	4.27	2.36	3.06	1.50	3.10	3.15	1.25	1.73	0.69	6.96	5.06	4.43	37.56
1933	2.55	2.54	1.68	3.81	1.48	3.44	5.01	4.15	0.17	0.83	0.49	1.56	27.71
1934	1.18	4.08	4.11	3.18	4.58	5.61	4.72	5.22	5.60	0.71	6.35	1.94	47.28
1935	2.37	2.13	3.99	3.20	3.37	1.00	5.47	1.54	6.01	2.11	2.71	2.62	36.52
1936	5.90	4.44	5.32	5.71	0.22	5.92	7.56	4.18	2.70	3.46	1.88	4.93	52.22
1937	6.00	3.45	1.55	4.98	0.61	3.28	3.82	14.07	3.26	3.61	1.41	1.65	47.72
1938	3.47	0.73	4.16	3.39	4.19	5.83	5.80	2.92	3.62	1.25	2.71	3.68	41.75
1939	4.17	7.32	4.82	3.52	2.47	5.95	7.68	7.23	0.65	2.24	1.41	2.08	49.54
1940	3.21	2.66	3.32	3.06	4.88	-----	-----	-----	-----	-----	-----	-----	-----
1941	1.54	1.26	3.00	2.01	1.76	1.85	5.24	0.91	1.72	0.85	0.40	2.20	22.74
1942	1.34	3.21	4.39	0.69	4.65	3.27	5.19	3.68	6.38	4.43	1.86	4.40	43.49
1943	3.72	1.37	4.14	3.12	2.90	5.52	7.14	1.60	2.24	0.36	1.25	3.39	36.75
1944	3.35	4.84	5.67	3.88	1.87	2.55	7.60	2.14	9.05	1.81	4.44	2.18	49.38
1945	1.85	4.41	1.55	2.66	2.90	2.49	10.58	4.39	11.49	2.19	1.38	5.46	51.35

Mean Temperature at Durham

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1921	-----	-----	-----	60.4	64.3	75.5	79.3	77.3	78.6	58.6	-----	-----	-----
1922	-----	-----	-----	-----	67.7	76.0	78.0	74.2	71.9	60.4	48.6	43.0	-----
1923	41.0	38.4	48.7	55.4	65.1	76.4	77.5	77.0	72.0	58.6	47.0	47.0	58.7
1924	36.4	38.2	45.4	55.3	64.4	75.2	76.1	76.4	66.0	58.0	48.2	40.8	56.7
1925	37.5	46.6	50.0	60.2	63.2	78.2	79.7	75.2	77.2	56.9	46.8	38.9	59.2
1926	36.5	45.5	44.2	57.1	66.4	74.0	80.2	80.0	74.7	62.4	46.8	41.7	59.1
1927	40.0	49.8	50.8	57.6	68.6	71.8	77.0	74.0	72.2	61.9	53.0	42.8	60.0
1928	40.8	42.5	50.2	56.0	65.0	74.2	79.4	79.0	66.9	63.6	51.0	41.6	59.2
1929	41.8	39.8	54.8	62.0	68.1	73.4	76.7	75.6	71.0	58.4	52.2	42.5	59.7
1930	42.9	47.2	48.4	58.8	69.6	74.0	80.2	75.3	76.6	57.3	47.4	37.4	59.6
1931	40.6	44.4	45.4	57.3	66.0	76.3	82.0	76.0	75.9	62.8	55.2	49.8	61.0
1932	50.1	49.2	47.2	58.6	67.2	76.8	81.0	78.4	72.6	61.7	47.2	44.8	61.2
1933	48.0	44.2	50.4	59.6	72.6	77.8	78.2	77.6	77.0	61.7	48.8	47.3	61.9
1934	44.6	35.4	48.3	60.8	67.8	78.2	81.2	79.4	73.2	59.6	53.0	41.8	60.3
1935	40.5	43.8	56.2	57.3	65.8	75.5	78.4	77.4	70.4	60.5	53.0	34.6	59.6
1936	36.0	37.5	53.3	56.3	69.6	74.4	78.8	78.2	72.2	62.2	48.6	42.6	59.1
1937	49.5	43.7	48.2	56.7	68.2	77.2	77.2	77.2	67.4	57.6	46.8	39.9	59.1
1938	40.2	47.4	55.3	58.9	67.6	72.1	75.8	78.1	69.5	58.0	51.6	40.8	59.6
1939	43.2	47.8	52.6	58.1	67.2	77.7	76.4	76.6	72.8	61.8	46.0	43.0	60.3
1940	28.6	41.5	46.3	56.2	65.6	-----	-----	-----	-----	-----	-----	-----	-----
1941	38.4	37.0	44.0	61.6	68.8	75.1	79.7	77.9	74.0	67.4	49.9	44.2	59.8
1942	38.3	38.6	51.2	59.8	68.2	76.2	78.3	75.1	71.8	61.4	51.2	40.0	59.2
1943	42.1	42.9	48.6	56.2	68.8	78.9	77.6	77.6	67.6	58.1	47.8	40.6	58.9
1944	40.2	44.0	47.0	58.6	70.8	77.0	75.8	74.6	72.0	59.0	48.3	37.1	58.7
1945	39.5	44.0	61.5	63.7	65.2	76.2	77.4	76.2	73.7	58.5	51.6	36.2	60.3

Highest Temperature at Durham

Year	January	February	March	April	May	June	July	August	September	October	November	December	Highest
1921	---	---	---	88	91	99	96	99	101	85	--	--	--
1922	---	---	---	---	89	92	95	93	94	90	75	70	--
1923	70	69	81	84	86	97	97	96	94	82	69	74	97
1924	63	67	78	87	89	98	93	96	94	84	78	74	98
1925	64	75	84	93	94	97	98	100	101	87	70	65	101
1926	68	73	80	84	92	100	104	97	93	92	75	68	104
1927	70	77	84	89	94	97	96	92	95	89	78	78	97
1928	74	66	79	80	93	96	97	97	90	85	77	65	97
1929	69	68	88	92	88	94	94	92	90	80	81	73	94
1930	75	83	75	93	91	98	101	101	100	83	73	65	101
1931	72	70	66	84	90	100	100	95	99	92	80	77	100
1932	76	80	78	86	93	95	102	105	104	81	69	70	105
1933	74	73	82	84	95	103	99	96	97	90	82	73	103
1934	74	74	79	88	92	98	98	53	90	83	79	69	98
1935	72	72	58	85	89	97	96	99	93	85	75	66	99
1936	68	78	84	89	94	100	98	96	94	83	79	67	100
1937	75	73	77	89	93	98	98	92	91	87	73	68	98
1938	66	76	84	86	92	91	95	97	93	87	78	70	97
1939	71	74	83	84	92	94	93	94	99	92	--	73	--
1940	59	67	76	83	94	--	--	--	--	--	--	--	--
1941	--	60	72	91	99	94	96	100	99	98	75	72	--
1942	70	64	78	90	90	97	99	100	94	80	79	66	100
1943	74	73	78	88	90	99	95	100	92	83	74	74	100
1944	77	73	86	86	93	98	94	94	95	87	73	64	98
1945	61	73	91	89	90	102	99	93	92	82	84	60	102

Lowest Temperature at Durham

Year	January	February	March	April	May	June	July	August	September	October	November	December	Lowest
1921	--	--	--	32	39	47	60	53	59	27	--	21	--
1922	15	10	25	--	39	56	69	48	48	34	19	21	--
1923	20	14	21	21	36	56	56	52	44	36	23	22	14
1924	6	18	25	25	41	53	59	53	45	32	24	13	6
1925	9	21	15	33	38	53	55	52	54	27	23	8	8
1926	12	18	12	29	39	53	54	63	54	28	21	12	12
1927	10	28	16	31	41	52	57	53	43	38	25	15	10
1928	7	21	25	28	40	52	62	62	40	33	20	17	7
1929	15	18	22	36	43	47	58	53	43	34	13	11	11
1930	13	16	21	29	44	47	60	52	48	29	15	7	7
1931	7	21	22	31	39	49	66	56	42	31	26	21	7
1932	24	27	16	33	43	53	55	55	49	34	21	17	16
1933	20	14	22	35	47	47	52	59	49	29	15	14	14
1934	5	7	16	32	44	60	66	31	52	28	25	19	5
1935	7	15	22	35	39	53	62	52	44	31	25	3	3
1936	1	2	30	28	40	45	57	57	45	28	16	20	1
1937	31	--	23	28	--	56	56	58	45	28	15	12	--
1938	13	23	25	26	46	43	56	57	41	31	16	16	13
1939	15	16	25	28	32	62	59	58	46	27	--	17	15
1940	6	11	10	26	36	--	--	--	--	--	--	--	--
1941	--	14	21	35	34	52	64	47	43	33	18	17	--
1942	0	14	26	30	43	55	60	48	39	30	23	10	0
1943	17	10	11	25	35	63	60	50	39	33	23	12	10
1944	5	14	18	28	39	54	55	52	49	26	25	14	5
1945	18	14	31	27	35	44	57	51	55	30	20	12	12

Precipitation at New Bern, Craven County, North Carolina;
Monthly and annual amounts (in inches and hundredths)

New Bern, Craven County.- Elevation, 12 feet

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1872	0.00	3.74	3.51	2.60	7.53	5.40	4.31	12.00	5.75	6.70	3.30	5.55	00.00
1873	7.10	4.95	1.85	-----	-----	-----	6.20	9.55	7.19	4.60	4.45	5.70	-----
1874	8.50	11.35	7.75	9.55	6.80	4.60	9.70	10.10	12.80	-----	-----	-----	-----
1875	4.40	2.75	6.00	4.05	3.05	7.85	5.52	7.40	3.50	3.50	4.95	2.45	55.42
1876	1.30	2.80	5.50	2.45	5.45	10.25	8.35	7.55	9.05	3.30	2.10	4.20	62.30
1877	3.10	2.45	3.19	5.25	1.25	6.00	10.40	7.85	14.00	5.85	5.95	-----	-----
1878	7.30	4.40	2.35	4.55	3.50	-----	4.40	19.65	3.90	5.75	1.80	4.90	-----
1879	2.85	2.80	4.80	1.55	4.30	1.60	8.60	7.55	2.75	1.80	3.90	1.50	44.00
1880	-----	3.80	5.75	4.60	.80	6.90	8.80	7.80	3.25	5.00	6.80	-----	-----
1881	-----	7.70	4.50	4.01	6.50	4.30	7.80	5.40	-----	-----	2.30	4.45	-----
1882	2.25	2.30	4.90	4.70	3.60	2.95	12.89	12.36	10.95	3.45	3.10	4.95	68.40
1884	-----	-----	-----	3.54	2.12	4.04	3.57	7.38	3.18	.41	-----	-----	-----
1885	-----	-----	-----	-----	10.86	5.17	5.50	5.94	3.00	3.41	-----	-----	-----
1886	-----	-----	-----	1.27	2.54	4.25	6.66	8.96	3.38	.34	-----	-----	-----
1887	-----	-----	-----	-----	4.40	2.78	6.01	11.88	.40	4.98	-----	-----	-----
1888	4.20	4.60	5.80	1.17	7.26	3.81	1.63	2.27	11.76	5.76	3.60	4.03	55.89
1889	5.80	2.65	2.90	2.50	6.12	6.41	8.44	2.89	2.71	3.16	3.59	.30	47.47
1890	.67	2.16	2.82	2.75	5.50	5.09	9.70	3.69	6.77	3.51	.20	3.90	46.76
1891	4.10	3.40	6.40	1.80	4.94	1.60	6.51	11.57	4.40	3.87	.77	1.74	51.10
1892	6.11	4.26	2.83	2.30	3.49	9.28	7.56	5.57	8.35	.67	2.61	2.35	55.38
1893	3.08	3.25	3.61	3.57	4.67	5.70	5.75	9.33	3.44	4.47	3.50	4.53	54.90
1894	3.93	4.08	3.15	.66	5.08	1.20	9.00	7.21	5.10	4.66	2.70	1.50	48.27
1895	6.30	3.36	5.10	10.20	4.67	5.88	5.33	4.54	1.57	1.53	4.94	2.10	55.52
1896	3.55	4.65	1.87	2.37	1.99	2.02	11.61	3.86	4.37	2.17	1.52	4.29	44.27
1897	1.74	4.12	3.85	1.91	2.68	2.98	2.55	3.68	.74	4.89	1.33	4.79	35.26
1898	1.95	2.22	2.63	4.16	4.33	4.91	9.19	6.05	3.87	7.65	3.56	1.48	52.00
1899	3.06	3.94	2.22	5.20	5.50	5.19	7.84	7.61	1.17	3.50	1.83	2.16	49.22
1900	5.84	3.60	4.04	4.58	5.21	5.82	6.46	5.40	1.95	5.17	3.62	4.77	56.46
1901	2.88	3.43	4.60	4.83	7.74	3.73	10.97	6.20	7.04	1.74	2.07	5.18	59.41
1902	2.09	5.70	3.20	2.49	3.26	5.34	4.50	7.96	4.88	3.99	3.77	4.52	51.70
1903	4.48	4.82	5.20	3.97	2.68	4.60	5.18	9.01	1.04	4.54	1.57	2.38	49.47
1904	4.24	5.47	4.38	1.65	3.17	3.22	6.56	9.30	2.04	1.59	1.99	3.94	47.55
1905	3.10	6.54	2.67	5.04	4.80	5.75	8.10	2.47	7.01	3.09	.74	9.27	58.58
1906	7.62	5.06	7.68	2.24	3.14	16.78	11.90	10.67	2.57	4.65	1.29	3.45	77.05
1907	1.49	3.41	2.07	4.05	6.20	8.34	9.82	12.21	6.42	.56	4.71	3.20	62.28
1908	5.60	5.20	6.73	3.61	11.53	9.95	17.60	11.77	2.76	9.38	2.37	3.64	90.14
1909	2.41	4.33	1.24	6.26	2.27	17.05	6.75	5.61	1.78	.77	1.01	2.03	51.51
1910	1.99	6.25	2.19	3.31	11.80	16.33	4.59	11.25	5.06	2.56	.49	3.28	69.10
1911	3.05	.92	4.61	2.56	1.44	2.66	4.29	5.32	6.85	6.37	2.39	2.28	42.74
1912	7.20	4.16	5.83	1.98	6.76	9.45	5.70	5.46	4.24	1.09	1.96	3.02	56.85
1913	1.88	3.91	8.58	1.52	2.65	6.97	10.60	5.62	8.45	6.70	1.21	2.97	61.06
1914	2.51	6.73	4.80	5.55	3.55	4.29	3.78	6.21	6.50	8.56	3.94	3.70	60.12
1915	8.35	3.39	2.63	3.26	3.73	1.51	10.64	3.35	2.78	1.63	2.00	2.96	46.23
1916	1.93	3.22	3.43	1.90	3.48	6.97	8.14	5.06	7.57	3.24	2.03	2.78	49.75
1917	4.48	2.13	4.45	4.47	2.27	10.70	10.01	4.18	12.27	1.28	1.27	3.34	60.85
1918	3.57	1.61	2.53	10.38	1.67	2.91	12.11	8.13	3.31	1.53	1.54	7.33	56.62
1919	5.22	4.12	6.49	1.05	3.89	4.60	8.41	3.90	2.08	4.80	.22	1.76	46.54
1920	1.48	5.95	4.12	7.70	.68	6.84	10.94	8.80	7.57	4.30	3.85	7.64	69.87

Precipitation at New Bern, Craven County, North Carolina:
Monthly and annual amounts (in inches and hundredths)

New Bern, Craven County.- Elevation, 12 feet

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1921	3.42	3.99	3.05	4.72	4.26	2.45	8.13	6.15	2.19	1.70	2.41	1.48	43.96
1922	5.45	5.25	7.34	4.06	2.65	8.96	7.74	8.46	.82	5.50	.40	7.56	64.19
1923	4.09	2.47	3.63	3.92	2.34	6.26	6.57	9.15	6.00	2.24	2.53	2.97	52.17
1924	4.42	5.69	3.03	3.66	5.46	7.85	12.13	7.51	12.62	1.77	2.00	5.16	71.30
1925	6.33	2.27	2.08	1.49	1.82	6.77	4.88	3.44	2.99	2.23	3.03	3.75	41.08
1926	6.40	4.45	6.45	1.27	1.80	8.62	3.63	3.65	1.04	1.28	5.84	1.64	46.07
1927	.91	3.42	3.07	.80	1.61	6.45	3.80	4.98	3.05	3.07	2.03	5.38	38.57
1928	1.17	7.25	1.97	6.43	2.86	5.08	4.83	3.44	15.56	2.25	3.59	5.56	60.00
1929	5.11	6.59	4.26	1.84	7.84	5.82	8.97	3.52	6.82	3.43	4.44	3.72	62.36
1930	6.50	.72	2.24	1.79	1.54	4.83	6.66	2.04	7.15	2.61	2.48	7.09	45.65
1931	3.21	2.68	3.90	1.95	5.61	1.09	9.75	4.72	3.06	0.72	1.92	6.49	45.10
1932	3.28	2.50	3.59	2.63	4.07	4.62	2.63	6.53	4.41	5.91	10.03	3.61	53.81
1933	2.62	4.60	3.90	4.22	3.55	2.40	8.54	6.59	4.35	0.53	0.48	0.50	42.28
1934	1.75	5.25	6.38	3.12	6.41	1.32	4.50	5.19	6.66	0.19	5.32	4.71	50.80
1935	3.52	1.91	3.74	3.16	2.96	3.31	12.09	12.86	10.77	1.61	3.22	7.09	66.84
1936	7.44	5.44	6.70	2.28	1.21	4.35	6.63	4.84	4.59	9.93	2.88	8.14	64.43
1937	5.26	5.93	2.28	7.90	3.68	5.63	16.05	2.81	5.55	3.28	8.59	3.25	70.21
1938	2.55	1.69	2.33	7.39	2.84	5.74	5.43	2.85	12.89	2.85	2.86	4.36	53.78
1939	3.36	7.24	3.41	4.09	4.09	7.34	11.38	11.53	1.41	2.28	3.31	2.05	62.29
1940	3.24	4.58	3.00	3.10	4.46	4.02	2.29	12.48	4.42	0.82	2.45	1.74	46.60
1941	1.99	3.62	3.09	4.71	0.48	5.11	9.73	5.32	0.27	1.97	0.19	4.94	41.42
1942	2.48	2.55	5.05	0.30	0.98	4.82	3.08	6.81	8.13	8.38	1.06	5.25	48.89
1943	3.79	1.00	6.21	2.05	9.62	1.80	10.45	6.41	0.71	0.85	2.07	4.71	49.67
1944	5.43	6.41	5.40	4.47	1.84	0.26	7.24	5.88	3.31	2.45	3.83	3.04	49.56
1945	1.60	4.83	1.21	1.52	1.90	10.70	9.12	9.74	12.44	1.62	3.75	7.17	65.60

Mean Temperature at New Bern

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1901	45.8	43.0	55.5	55.3	70.0	76.4	80.6	80.4	74.1	63.8	48.2	46.1	61.6
1902	44.4	44.1	54.6	60.4	70.6	75.7	80.6	77.8	71.8	65.1	58.1	46.2	60.8
1903	45.4	49.4	60.5	60.1	69.2	73.4	79.6	79.3	72.2	61.1	49.1	42.6	61.8
1904	39.6	40.7	53.6	58.8	68.3	76.5	79.2	78.0	73.6	62.2	51.5	44.8	60.6
1905	40.6	40.4	55.6	60.8	72.6	76.0	80.3	77.8	75.2	62.6	54.4	46.4	61.9
1906	48.0	44.8	50.6	62.8	69.6	77.8	78.6	81.0	77.4	63.8	53.4	46.1	62.8
1907	49.9	42.8	57.4	54.0	67.8	72.6	79.9	78.2	76.4	59.6	51.5	46.8	61.4
1908	44.4	44.1	59.4	65.2	69.2	74.9	79.1	77.8	71.4	62.3	55.4	50.0	62.8
1909	48.0	51.2	51.5	61.8	68.0	77.2	76.0	75.8	70.9	59.5	58.5	40.8	61.7
1910	45.0	46.0	57.8	61.4	66.2	72.4	78.4	76.5	73.4	64.4	48.0	40.0	60.8
1911	49.1	47.0	49.4	57.8	69.2	77.8	79.0	78.0	75.7	64.4	53.0	50.7	62.6
1912	38.5	40.8	51.1	62.4	69.2	73.9	77.3	76.2	74.6	62.6	51.0	48.3	60.5
1913	52.9	46.8	58.3	61.2	71.3	75.3	80.8	79.0	72.8	63.2	54.8	50.0	63.9
1914	44.4	44.1	59.4	65.2	71.2	79.3	80.0	80.2	71.8	65.3	52.1	43.6	60.8
1915	44.9	47.6	45.2	61.8	71.9	75.5	81.0	80.4	77.3	67.8	55.2	42.2	62.6
1916	49.9	45.3	49.8	59.8	72.6	75.6	78.8	79.5	72.0	65.0	55.2	46.4	62.5
1917	47.6	44.2	53.0	62.5	67.0	76.7	80.0	79.0	70.8	60.5	49.2	37.2	60.6
1918	35.8	49.2	57.0	60.4	73.8	75.4	77.2	81.0	71.4	69.0	54.7	52.3	63.1
1919	49.6	47.0	55.7	62.3	72.0	75.4	80.1	79.1	74.2	74.2	56.8	46.7	64.4
1920	46.1	44.0	54.4	62.0	66.0	76.6	77.6	78.4	76.1	65.4	56.0	48.4	62.6
1921	49.1	50.4	63.2	63.2	66.8	76.9	79.9	78.4	79.4	62.9	56.4	48.3	64.6
1922	44.4	51.0	56.3	63.8	71.4	77.8	80.2	76.0	75.0	66.0	54.2	51.4	64.0
1923	48.6	54.2	56.0	61.4	68.8	78.4	78.6	79.6	75.0	61.4	53.0	52.8	63.2
1924	46.0	44.2	51.0	61.0	69.6	78.0	78.4	79.0	71.7	63.0	56.0	49.2	62.3
1925	45.3	52.9	57.3	65.2	69.0	80.0	81.6	78.6	79.2	63.6	53.2	45.5	64.3
1926	45.0	49.5	49.0	60.6	69.8	75.6	81.0	82.2	76.9	66.0	53.8	48.8	63.2
1927	45.2	56.0	55.2	62.4	72.4	75.6	79.6	77.1	75.8	67.0	58.2	49.2	64.5
1928	46.0	47.8	54.5	60.4	68.0	78.7	80.4	82.2	73.6	67.2	55.0	48.2	63.5
1929	48.2	46.5	59.3	66.0	71.0	76.0	79.0	78.2	74.4	64.0	56.0	48.4	64.0
1930	48.5	52.7	52.4	63.6	72.2	75.8	81.7	76.8	78.5	60.8	53.2	43.4	63.3
1931	45.0	48.4	48.6	60.8	69.9	77.2	82.6	79.9	77.2	65.1	59.1	55.6	64.1
1932	55.4	55.2	51.7	62.0	70.6	79.8	84.0	80.4	74.6	66.0	53.8	51.6	65.4
1933	52.8	48.4	54.5	64.0	77.0	79.9	80.1	80.8	79.9	67.6	54.5	53.3	66.1
1934	49.6	39.3	51.1	63.6	69.5	80.5	82.6	81.0	76.8	64.2	56.5	45.8	63.4
1935	45.4	48.5	60.5	61.2	69.6	78.9	79.4	79.6	74.4	65.2	57.2	39.4	63.3
1936	42.1	42.2	57.0	61.4	71.8	77.1	81.4	81.4	77.5	68.1	52.6	50.0	63.6
1937	58.7	46.2	51.5	61.7	70.6	79.2	80.3	80.3	72.1	62.1	51.4	44.5	63.2
1938	44.2	51.8	59.0	65.2	72.0	76.3	79.0	81.4	74.0	62.6	57.1	47.0	64.1
1939	48.0	53.2	56.9	62.2	69.0	79.4	78.5	78.8	76.2	66.2	51.2	44.9	63.7
1940	33.6	46.0	51.7	59.6	68.6	78.6	79.6	78.9	72.1	61.3	55.1	51.6	61.4
1941	44.2	41.5	48.4	64.4	71.2	76.6	80.6	79.2	77.0	69.6	55.7	49.4	63.2
1942	44.4	41.8	55.9	62.6	71.8	79.2	82.2	78.4	75.1	65.2	57.2	44.6	63.2
1943	46.6	47.2	52.6	59.5	71.2	81.4	79.0	79.2	71.2	62.1	53.2	45.3	62.4
1944	45.4	49.0	53.2	61.9	74.2	80.5	79.0	77.8	75.8	64.0	53.0	42.7	63.0
1945	43.6	49.2	63.4	67.1	68.6	78.2	80.0	77.0	78.3	64.5	57.4	42.7	64.2

Highest Temperature at New Bern

Year	January	February	March	April	May	June	July	August	September	October	November	December	Highest
1901	75	77	78	76	95	93	97	93	94	84	81	73	97
1902	71	77	81	85	89	92	98	95	89	85	80	76	98
1903	72	75	80	86	92	89	94	97	89	87	79	66	97
1904	68	78	81	82	88	93	96	94	91	89	74	72	96
1905	71	66	82	86	91	93	95	97	93	89	79	73	97
1906	77	77	78	89	95	96	95	96	95	87	85	75	96
1907	80	74	92	85	91	92	99	93	94	88	79	74	99
1908	68	72	87	90	91	95	95	96	89	85	84	78	96
1909	81	78	78	88	92	93	95	94	92	84	82	73	95
1910	74	77	87	88	90	89	94	90	94	90	75	69	94
1911	78	78	75	83	93	103	97	96	93	93	78	81	103
1912	69	73	82	85	89	95	94	96	95	90	83	76	96
1913	79	81	77	87	92	95	96	95	93	89	85	77	96
1914	77	77	77	87	98	101	101	97	97	88	80	76	101
1915	72	78	75	94	96	96	99	97	99	89	85	72	99
1916	78	77	83	90	95	94	94	96	93	89	83	76	96
1917	76	81	78	92	95	96	98	98	92	85	77	69	98
1918	65	80	87	88	95	98	97	99	92	90	76	80	99
1919	77	74	77	88	95	94	98	95	94	97	85	76	98
1920	77	66	84	88	89	100	94	96	95	87	82	75	100
1921	77	79	88	90	95	97	96	96	95	87	83	72	97
1922	82	79	83	95	92	96	95	93	93	89	81	77	96
1923	74	76	87	87	88	99	96	96	92	82	75	76	99
1924	72	71	81	88	94	101	98	96	93	85	83	81	101
1925	74	76	84	98	98	97	98	98	100	93	76	73	100
1926	72	75	83	89	94	97	99	98	97	91	79	76	99
1927	79	83	87	89	96	98	97	96	95	90	80	83	98
1928	80	73	82	82	--	101	97	98	93	89	82	72	101
1929	79	73	90	95	91	92	95	95	92	86	84	79	95
1930	78	86	79	97	92	97	--	97	96	89	79	70	--
1931	74	75	77	88	92	96	98	97	97	89	84	84	98
1932	82	85	83	90	96	98	104	103	98	84	78	79	104
1933	80	78	86	86	97	103	98	99	97	90	82	79	103
1934	77	71	83	92	93	99	98	98	92	88	80	74	99
1935	73	78	91	88	94	96	95	99	91	88	83	71	99
1936	74	80	83	91	95	105	100	98	95	85	83	73	105
1937	82	79	82	89	93	96	95	94	94	91	78	77	96
1938	74	81	88	90	97	94	95	99	96	87	84	74	99
1939	77	81	86	90	93	97	93	95	101	92	--	--	--
1940	64	70	78	86	94	97	100	94	90	82	78	75	100
1941	72	61	72	92	98	93	96	97	94	93	81	73	98
1942	71	69	86	88	90	99	100	97	94	82	81	76	100
1943	81	76	83	88	90	99	94	94	93	84	78	77	99
1944	79	76	87	85	93	101	96	94	98	88	75	71	101
1945	69	81	89	87	92	98	95	90	92	89	83	64	98

Lowest Temperature at New Bern

Year	January	February	March	April	May	June	July	August	September	October	November	December	Lowest
1901	23	17	17	37	48	57	65	66	54	36	25	15	15
1902	18	11	22	32	47	52	62	53	51	37	32	16	16
1903	20	18	36	32	47	49	63	62	46	30	18	22	18
1904	15	15	27	30	41	53	66	60	47	36	27	22	15
1905	12	15	25	31	52	51	67	54	49	35	27	25	12
1906	23	18	23	32	39	61	64	69	60	31	25	16	16
1907	20	18	28	27	43	49	59	62	55	34	27	21	18
1908	18	16	28	34	37	55	61	60	45	40	26	24	16
1909	17	20	29	31	43	55	55	54	41	30	24	12	12
1910	18	15	27	36	39	49	60	62	51	26	24	15	15
1911	22	22	22	33	44	53	61	61	52	44	24	21	21
1912	8	5	24	36	45	48	61	53	55	44	20	17	5
1913	22	22	31	34	42	50	59	59	48	33	26	23	22
1914	--	--	--	--	45	56	57	57	47	31	22	21	--
1915	23	24	27	29	51	57	63	61	53	41	29	18	18
1916	19	17	26	33	46	54	61	62	51	43	27	22	17
1917	20	10	29	34	41	56	65	62	50	34	23	5	5
1918	4	19	30	33	45	55	57	60	46	44	34	25	4
1919	16	21	36	31	52	52	54	60	54	52	28	20	16
1920	13	21	22	33	41	54	57	63	58	34	30	26	13
1921	21	29	35	31	42	49	67	56	62	35	30	23	21
1922	19	16	32	36	46	62	64	56	57	39	24	29	16
1923	24	18	28	27	41	55	61	61	54	40	27	28	18
1924	10	24	26	31	48	58	61	61	50	39	28	22	10
1925	23	28	22	39	42	64	62	60	60	35	25	11	11
1926	21	23	19	32	41	53	61	63	58	32	28	17	17
1927	13	31	23	34	44	55	57	57	54	43	28	20	13
1928	12	25	30	34	--	55	65	62	47	39	25	23	12
1929	24	23	25	38	47	51	60	58	50	41	15	13	13
1930	21	16	23	36	47	51	64	53	55	33	20	21	16
1931	19	24	26	37	43	53	65	60	52	39	35	32	19
1932	29	33	18	38	47	61	60	63	53	40	30	25	18
1933	27	19	28	42	58	54	57	64	66	46	18	22	18
1934	10	9	25	37	50	64	68	57	61	35	26	19	9
1935	15	21	27	36	47	55	61	60	50	36	27	15	15
1936	15	8	31	31	50	55	59	62	61	40	25	29	8
1937	40	23	19	35	42	60	66	64	52	35	22	20	19
1938	17	27	25	37	50	53	60	63	49	40	21	24	17
1939	20	22	30	33	40	62	61	59	54	39	--	--	--
1940	8	15	26	33	45	59	60	62	51	35	27	22	8
1941	23	24	26	43	37	56	67	60	57	43	30	26	23
1942	13	19	30	34	54	63	65	57	45	38	28	12	12
1943	21	14	17	30	42	64	62	61	27	38	29	13	13
1944	18	22	28	29	48	58	61	57	55	34	32	21	18
1945	24	16	38	43	46	53	65	58	66	40	25	20	16

Precipitation at Raleigh, Wake County, North Carolina:
Monthly and annual amounts (in inches and hundredths)

Raleigh, Wake County.- Elevation, 376 feet

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1866	-----	-----	-----	-----	-----	-----	-----	1.81	5.50	5.06	2.40	3.56	-----
1867	0.60	2.44	6.10	3.10	5.80	14.40	2.45	6.85	1.70	4.50	2.70	2.95	53.59
1868	4.20	3.00	4.60	3.80	3.20	2.45	5.95	7.17	2.66	3.75	1.45	3.60	45.83
1869	3.50	8.80	7.40	2.40	3.80	2.60	-----	-----	-----	-----	-----	-----	-----
1870	-----	5.95	-----	3.65	5.05	.95	-----	-----	-----	-----	-----	-----	-----
1873	-----	-----	-----	-----	-----	1.54	3.34	7.42	3.23	3.22	5.40	.75	-----
1874	1.73	3.15	1.33	6.07	5.75	2.17	5.60	5.42	3.90	1.35	2.33	1.83	40.63
1875	1.70	2.56	4.97	4.55	4.22	3.75	5.01	8.03	5.54	1.22	2.83	4.00	48.38
1876	.60	3.23	2.77	2.50	3.55	4.01	2.51	8.60	4.33	.47	2.60	.32	35.49
1877	-----	.90	4.22	4.10	-----	-----	-----	-----	-----	-----	-----	-----	-----
1883	-----	-----	-----	-----	-----	-----	-----	-----	-----	3.10	-----	3.00	-----
1884	5.70	-----	-----	1.96	1.00	5.93	3.82	3.60	7.00	.50	-----	4.50	-----
1885	1.70	6.40	.99	2.00	5.77	2.42	3.80	4.10	3.90	6.27	3.81	4.21	45.37
1886	2.40	2.10	3.80	4.80	1.70	4.80	5.25	6.90	4.20	.90	1.05	3.00	40.90
1887	3.04	4.97	4.13	2.10	3.46	6.22	6.11	10.80	2.17	10.23	1.00	4.99	59.22
1888	3.98	3.86	6.88	1.71	6.07	4.06	4.93	4.05	10.88	4.31	3.01	3.18	56.92
1889	6.02	3.36	2.72	4.01	5.30	10.44	6.04	8.74	1.68	3.41	3.07	.60	55.39
1890	.83	2.80	3.74	1.96	4.16	2.37	11.23	5.83	3.11	3.91	.06	3.57	43.57
1891	3.96	5.10	7.25	2.98	9.24	4.12	10.99	10.42	1.76	2.64	3.71	1.24	63.41
1892	6.87	3.59	3.29	5.57	3.10	4.84	4.18	4.42	1.98	.53	2.92	3.72	45.01
1893	3.70	6.17	1.59	1.40	5.80	4.15	3.79	7.80	3.20	5.57	1.97	4.38	49.52
1894	4.66	3.83	2.14	1.74	7.51	1.75	6.33	6.15	5.00	7.08	1.59	2.46	50.24
1895	7.44	2.66	6.09	7.95	3.46	3.79	7.08	3.99	.38	2.82	2.84	2.62	51.12
1896	2.87	6.73	3.26	1.50	6.53	3.41	5.23	4.19	3.78	2.07	2.50	1.84	43.91
1897	2.23	4.42	4.82	4.66	2.85	3.44	4.90	1.94	.70	2.62	3.43	2.56	38.57
1898	1.81	.42	4.16	3.05	7.46	3.28	6.48	5.13	3.95	3.00	2.73	1.88	43.35
1899	3.37	7.48	6.33	4.01	4.78	4.42	8.85	3.37	2.68	5.12	.50	2.02	52.93
1900	2.95	4.56	3.76	4.09	3.12	8.47	5.53	4.51	2.13	1.04	3.33	3.75	47.24
1901	2.20	1.48	2.96	5.55	9.90	6.04	7.14	11.21	8.26	1.62	.82	5.46	62.64
1902	2.39	7.08	2.14	3.10	2.00	3.04	3.39	2.76	2.92	3.07	4.12	3.15	39.16
1903	3.04	6.67	7.32	5.92	2.67	4.61	4.41	3.60	1.43	5.28	.88	2.21	48.04
1904	2.80	4.22	3.55	.29	2.76	6.64	3.48	5.51	5.23	2.70	5.13	3.02	45.33
1905	2.37	6.05	3.39	5.03	7.76	1.72	7.65	7.33	1.43	2.05	.66	6.52	51.96
1906	3.67	3.74	5.35	.73	1.73	4.96	5.35	8.28	3.29	2.63	.69	2.92	43.34
1907	1.23	4.26	3.38	3.63	4.75	6.73	1.42	2.96	6.13	.22	5.29	7.78	47.78
1908	4.26	3.66	5.58	2.56	2.03	6.20	6.14	13.63	7.70	3.76	1.47	3.64	56.63
1909	1.90	3.14	2.77	4.08	2.92	5.73	6.84	4.40	4.52	1.52	.11	1.89	39.82
1910	4.05	2.80	1.01	5.01	3.92	7.87	5.65	7.75	1.19	3.54	.69	3.65	47.13
1911	1.81	2.52	3.52	2.56	2.10	1.26	2.95	7.36	1.74	3.08	4.26	4.80	37.96
1912	2.38	2.89	6.42	3.74	4.39	4.74	1.28	2.86	3.20	1.66	2.35	3.58	39.49
1913	5.95	2.17	3.63	2.70	2.86	5.13	5.51	3.82	6.03	4.11	1.39	3.80	47.10
1914	2.87	4.45	3.49	2.45	1.20	3.42	7.29	3.48	4.29	1.17	3.38	6.60	44.09
1915	5.06	3.24	2.63	2.26	4.40	3.25	2.83	7.21	2.54	2.59	1.35	2.10	39.46
1916	2.69	2.76	2.17	2.32	2.95	7.17	8.09	6.10	1.42	2.08	.93	2.25	40.93
1917	4.09	3.19	5.70	4.92	2.94	5.92	7.82	1.30	5.05	4.30	1.46	1.98	48.67

Precipitation at Raleigh, Wake County, North Carolina:
Monthly and annual amounts (in inches and hundredths)

Raleigh, Wake County.- Elevation, 376 feet

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1918	4.80	1.16	2.53	6.96	4.18	2.31	5.37	2.41	5.21	.76	1.66	4.33	41.68
1919	3.14	3.49	2.38	1.69	6.15	2.22	10.26	4.88	.51	2.61	1.44	1.96	40.73
1920	3.28	5.49	3.52	3.40	1.03	4.83	6.00	3.80	2.69	2.29	6.72	4.35	47.40
1921	3.97	3.52	3.91	2.12	4.09	1.14	2.67	1.62	3.01	1.05	2.13	2.86	32.09
1922	4.09	7.14	5.47	2.57	4.05	5.91	4.00	7.10	.11	3.74	.36	3.47	48.09
1923	3.11	4.78	3.67	5.32	1.09	1.37	6.62	3.88	6.35	1.03	1.88	1.71	40.81
1924	3.84	4.95	2.08	3.08	5.16	6.75	5.59	5.89	10.12	1.28	1.69	3.81	54.24
1925	5.69	1.70	2.31	2.57	4.11	2.60	1.98	3.42	4.36	2.16	2.56	2.70	36.16
1926	4.29	4.20	5.17	1.64	.35	4.86	3.59	5.02	1.32	1.65	3.31	3.43	38.83
1927	1.18	3.90	2.78	4.39	2.69	4.28	3.91	7.07	3.82	2.77	1.55	6.47	44.81
1928	.86	3.23	2.58	5.50	4.24	6.06	2.31	10.41	11.92	1.44	.54	1.48	50.57
1929	2.23	6.99	6.00	2.92	6.05	4.99	6.52	2.43	4.12	9.59	4.82	2.17	58.83
1930	2.95	1.18	2.33	2.16	2.02	4.24	5.94	1.25	3.31	2.91	1.95	3.68	33.92
1931	2.08	1.80	3.15	3.44	6.16	2.53	12.36	9.54	2.37	.80	.06	6.12	50.41
1932	4.12	2.84	6.23	2.69	6.35	7.15	1.05	1.70	2.27	7.42	3.58	4.34	49.74
1933	2.86	3.37	2.01	5.33	2.66	1.44	2.12	6.02	.83	.89	1.48	.92	29.93
1934	1.77	3.09	5.03	3.09	4.68	5.05	6.37	6.51	6.12	0.61	8.04	2.32	52.68
1935	2.40	2.73	4.08	2.95	3.61	0.90	5.11	5.91	6.42	1.34	3.86	2.94	42.25
1936	6.62	5.38	4.46	5.21	1.13	8.07	11.65	2.55	6.49	3.61	2.53	6.52	64.22
1937	7.14	3.40	1.93	6.26	0.94	3.81	4.33	5.65	1.85	3.54	1.61	2.38	42.84
1938	2.46	0.87	1.39	2.94	4.60	8.16	5.01	1.31	4.85	1.52	3.57	2.93	39.61
1939	2.75	9.73	2.61	3.57	6.26	3.84	8.31	9.99	2.35	3.03	1.75	2.24	56.43
1940	2.58	2.52	3.35	3.16	3.51	1.81	2.51	7.19	1.71	0.44	4.02	1.66	34.46
1941	2.03	1.14	4.04	4.10	2.08	3.37	10.86	3.46	1.53	1.93	0.51	4.39	39.44
1942	1.29	2.51	5.04	1.68	3.36	4.34	3.15	7.03	5.30	6.26	1.56	3.81	45.35
1943	4.40	1.26	4.58	2.67	1.85	8.75	6.46	3.17	2.87	0.81	1.72	3.53	42.07
1944	4.26	5.10	7.18	5.46	1.55	1.66	5.31	5.48	7.42	2.24	3.41	2.22	51.29
1945	1.43	4.64	1.36	4.40	3.47	1.13	8.26	6.25	11.58	1.90	2.06	7.69	54.17

Mean Temperature - Raleigh, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1887	38.4	48.6	47.3	57.7	70.6	75.2	81.3	75.4	68.2	57.4	47.2	41.1	59.0
1888	40.4	44.7	46.8	58.9	67.1	76.2	78.4	78.1	68.6	55.8	51.0	41.6	59.0
1889	44.2	38.2	47.2	58.3	68.2	73.6	77.5	73.4	68.7	57.6	52.7	53.4	59.4
1890	51.6	52.7	49.6	59.6	69.4	78.6	76.6	74.5	71.0	60.3	53.8	41.3	61.6
1891	42.5	48.9	45.2	59.6	64.5	75.7	74.0	76.0	72.0	56.4	47.7	47.8	59.2
1892	38.6	43.8	46.6	57.2	67.6	75.8	76.8	78.7	69.8	59.0	47.9	40.0	58.5
1893	30.8	43.8	48.2	62.2	66.1	74.2	79.8	76.0	70.6	59.6	48.8	44.6	58.7
1894	43.6	45.0	56.0	58.4	69.6	75.8	77.4	75.4	73.0	60.8	48.3	43.6	60.6
1895	39.4	32.6	49.0	57.6	65.0	76.6	76.4	77.4	75.9	56.8	51.2	43.4	58.4
1896	39.1	43.8	48.2	63.6	74.0	74.6	79.6	78.7	71.8	58.8	55.3	40.4	60.7
1897	37.9	46.3	53.0	60.0	66.2	76.6	78.8	77.3	73.0	63.0	52.8	44.0	60.7
1898	45.2	40.8	55.2	55.8	70.0	76.0	79.5	78.8	73.4	61.6	48.9	43.6	60.7
1899	40.4	37.0	51.5	56.9	69.3	77.1	77.6	78.6	70.4	62.1	51.8	41.8	59.5
1900	42.6	40.0	47.5	59.2	69.0	76.0	80.9	82.2	75.8	65.6	53.6	42.7	61.3
1901	41.6	38.8	52.0	53.4	68.2	75.0	80.2	78.0	71.4	60.3	45.0	41.0	58.7
1902	37.6	36.0	51.0	57.6	70.7	76.4	80.7	77.0	70.2	63.0	56.5	42.4	59.9
1903	40.6	46.2	57.4	58.8	68.8	72.0	79.4	78.3	70.5	59.8	47.2	37.8	59.7
1904	37.0	38.3	51.2	56.3	68.0	75.6	77.8	76.9	71.2	58.6	49.2	40.4	58.4
1905	36.9	34.2	53.8	59.1	71.0	75.9	79.0	76.0	73.0	60.6	50.8	42.4	59.4
1906	45.7	41.8	46.0	62.8	68.4	76.8	77.0	79.9	75.6	59.2	52.2	44.4	60.8
1907	48.1	39.8	56.0	52.1	66.0	71.2	80.1	77.1	73.8	58.0	49.6	44.3	59.7
1908	40.4	39.2	57.0	63.2	69.0	74.3	78.6	75.0	69.2	60.8	53.1	45.6	60.4
1909	46.0	49.9	48.8	61.2	67.2	77.4	75.6	75.4	68.7	58.4	55.4	39.4	60.3
1910	42.0	41.6	57.6	61.0	66.8	73.0	78.3	76.2	73.4	63.8	46.2	37.9	59.8
1911	45.8	46.0	48.5	56.5	70.4	78.4	78.8	78.8	76.1	62.5	47.8	46.8	61.4
1912	33.6	38.7	49.6	62.6	69.4	74.0	78.6	77.6	75.4	62.6	50.9	46.4	60.0
1913	50.2	44.4	54.4	59.3	69.8	74.8	80.0	76.6	69.5	61.5	51.9	45.0	61.4
1914	45.0	38.7	45.6	59.4	70.2	78.6	78.4	78.2	68.9	63.2	50.8	38.6	59.6
1915	42.2	46.1	42.7	61.8	69.0	73.2	79.6	77.3	73.8	64.2	52.8	41.2	60.3
1916	47.8	42.3	49.3	58.7	71.7	73.6	77.0	77.8	69.4	61.8	52.2	42.7	60.4
1917	45.4	52.2	49.2	60.6	64.2	75.0	77.8	76.9	67.0	57.0	47.9	32.6	58.0
1918	32.4	48.0	55.7	57.0	72.1	74.5	75.0	79.2	67.2	64.2	51.4	46.6	60.3
1919	45.2	42.7	52.3	59.8	68.7	74.4	77.8	76.9	71.6	69.2	52.1	40.2	60.9
1920	39.0	38.8	50.6	57.8	63.4	75.2	76.4	75.8	73.5	63.6	50.2	43.4	59.0
1921	42.6	45.0	59.2	61.4	64.8	76.1	78.9	77.0	78.5	60.8	54.6	45.8	62.1
1922	38.6	48.0	52.8	61.0	69.0	76.8	78.6	74.4	72.7	63.2	51.6	46.3	61.1
1923	44.0	40.8	51.6	58.4	67.0	77.0	77.4	77.4	72.8	60.0	49.8	51.0	60.6
1924	40.8	40.6	48.7	57.8	66.8	75.9	76.2	77.7	67.4	60.8	51.7	44.0	59.0
1925	40.7	50.6	53.4	62.0	64.8	78.6	80.3	76.0	77.0	58.8	48.7	41.9	61.1
1926	41.2	46.2	45.2	57.8	68.2	73.6	79.5	80.0	74.2	63.2	48.8	43.0	60.1
1927	41.6	51.6	52.8	58.5	69.4	72.3	77.2	73.8	72.8	63.6	54.7	43.8	61.0
1928	42.5	43.7	49.9	56.8	66.2	74.8	79.4	78.6	67.6	64.0	52.2	44.3	60.0
1929	43.2	42.0	55.6	62.6	67.6	73.8	76.7	76.2	70.8	59.7	52.5	44.4	60.4
1930	43.9	49.6	48.8	60.6	70.8	74.8	80.4	76.0	76.6	58.4	49.4	39.8	60.8
1931	43.4	46.0	46.2	57.4	66.8	76.4	81.4	76.2	76.2	64.6	58.4	51.2	62.0
1932	52.6	51.5	49.2	60.4	67.6	76.9	81.8	78.7	72.8	62.4	49.0	47.2	62.5
1933	50.0	45.3	51.5	60.0	73.3	77.9	77.9	77.2	77.5	62.4	50.7	48.4	62.7
1934	46.2	34.8	48.2	60.4	67.7	78.8	80.8	78.1	73.8	60.6	53.8	42.6	60.5
1935	41.0	43.9	56.5	57.0	66.5	77.5	78.2	77.9	71.1	62.2	54.0	36.2	60.2
1936	38.2	39.7	55.2	57.2	71.4	75.4	79.9	79.4	74.0	63.6	50.2	45.2	60.8

Mean Temperature - Raleigh, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1937	50.8	43.1	49.4	60.0	69.2	78.0	78.6	78.6	69.5	59.2	49.6	42.6	60.7
1938	42.0	49.1	57.2	62.0	69.3	74.0	77.6	80.7	71.6	61.3	54.6	44.0	62.0
1939	46.0	51.0	54.9	60.0	68.6	79.2	77.6	77.9	74.9	63.6	49.6	44.7	62.3
1940	31.6	44.4	48.4	58.0	68.0	78.4	78.5	77.4	70.0	60.9	52.4	47.2	59.6
1941	40.6	38.7	44.8	63.6	70.2	75.6	80.2	78.7	75.1	68.2	53.4	46.2	61.3
1942	40.6	39.2	52.8	62.2	70.2	77.8	81.3	77.6	73.6	62.5	53.0	41.0	61.0
1943	43.4	45.4	49.9	58.0	71.0	80.4	79.2	79.1	69.2	60.1	49.5	41.6	60.6
1944	41.5	44.9	49.4	59.2	73.4	79.0	78.0	76.3	73.0	60.6	49.6	38.2	60.3
1945	39.7	44.8	61.0	63.8	65.8	77.2	78.0	76.2	75.6	61.0	53.5	37.0	61.2

Highest Temperature - Raleigh, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Highest
1887	69	72	77	86	90	102	103	92	92	82	71	66	103
1888	75	68	77	90	90	101	101	96	88	77	79	68	101
1889	68	68	74	89	94	93	95	90	87	82	80	75	95
1890	76	80	79	86	92	97	95	92	89	87	79	67	97
1891	68	77	72	85	90	95	90	93	89	88	76	72	95
1892	68	68	74	82	91	96	98	94	87	85	79	68	98
1893	65	72	78	91	90	91	100	93	92	84	74	74	100
1894	69	71	89	86	92	97	93	96	93	84	73	71	97
1895	69	71	85	85	98	100	97	94	98	80	78	71	100
1896	66	71	78	95	98	92	98	99	98	78	79	65	99
1897	68	75	80	86	86	96	96	95	98	89	76	68	98
1898	73	70	87	86	94	97	96	93	90	86	73	68	97
1899	73	72	75	87	92	98	95	97	100	83	75	69	100
1900	68	71	73	86	93	94	100	99	96	88	82	70	100
1901	75	72	76	82	90	95	98	91	92	83	77	72	98
1902	67	69	78	86	92	96	101	97	90	82	78	69	101
1903	67	71	79	87	95	92	96	99	87	85	79	60	99
1904	70	76	80	84	91	97	96	95	89	87	70	73	97
1905	66	55	78	87	91	94	96	96	92	86	75	63	96
1906	74	71	71	90	95	97	97	95	94	82	77	72	97
1907	79	67	94	83	91	91	98	93	91	81	76	68	98
1908	64	66	85	87	90	96	96	94	86	84	77	75	96
1909	76	73	78	87	88	94	93	95	88	80	76	69	95
1910	71	74	88	88	90	92	94	92	92	86	72	65	94
1911	75	74	77	85	92	100	98	96	92	92	75	70	100
1912	61	71	83	83	90	94	94	96	99	89	79	73	99
1913	73	74	78	86	94	95	99	93	90	92	76	68	99
1914	73	67	76	91	98	100	100	94	93	84	78	68	100
1915	66	70	65	92	91	93	98	95	94	85	79	72	98
1916	73	70	79	86	96	92	90	94	93	85	78	71	96
1917	71	78	78	91	92	93	98	95	91	84	75	65	98
1918	65	77	84	85	94	99	94	99	88	85	78	74	99
1919	70	65	75	86	92	94	95	93	92	92	81	75	95
1920	69	65	83	87	86	96	93	92	90	85	76	67	96
1921	72	73	86	87	90	97	96	97	97	83	78	71	97
1922	72	76	82	90	90	93	94	92	91	88	75	73	94
1923	71	70	80	85	86	95	95	96	91	80	71	72	96
1924	68	68	79	86	89	100	93	95	94	83	78	76	100
1925	66	75	85	93	94	96	96	98	100	88	72	66	100
1926	68	74	79	85	93	98	102	95	92	90	75	68	102
1927	72	78	84	89	93	97	96	93	95	85	78	77	97
1928	75	67	79	80	91	95	95	95	89	84	76	64	95
1929	70	73	88	91	88	93	93	93	89	79	80	74	93
1930	75	82	74	94	91	99	99	98	97	83	74	66	99
1931	72	70	68	83	88	96	98	95	97	88	80	79	98
1932	79	80	78	85	92	93	102	103	101	82	71	73	103
1933	75	75	83	84	94	101	98	94	94	87	81	71	101
1934	74	70	79	83	91	98	98	94	91	81	80	69	98
1935	73	73	86	86	89	96	94	99	94	84	77	65	99
1936	69	78	84	89	93	101	98	95	94	83	80	68	101

Highest Temperature - Raleigh, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Highest
1937	77	75	77	89	94	96	100	92	93	87	75	71	100
1938	70	78	84	86	94	92	94	98	93	86	79	70	98
1939	71	76	87	86	94	97	93	93	99	92	74	70	99
1940	63	68	77	84	95	96	104	95	94	85	80	73	104
1941	71	60	74	93	99	96	99	99	99	96	76	71	99
1942	71	66	80	90	92	98	102	101	96	82	80	76	102
1943	77	75	81	90	91	102	97	101	96	84	77	76	102
1944	78	75	83	86	95	102	96	95	97	90	75	67	102
1945	63	75	91	87	92	100	97	92	94	82	82	59	100

Lowest Temperature - Raleigh, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Lowest
1887	8	22	24	30	46	50	66	52	40	34	25	15	8
1888	17	15	20	35	44	52	58	53	39	33	30	18	15
1889	21	13	27	32	40	49	62	56	42	34	24	25	13
1890	23	29	20	31	44	58	56	52	51	34	29	23	20
1891	22	21	22	31	38	55	55	56	51	32	17	19	17
1892	16	17	23	30	45	52	54	63	48	33	20	11	11
1893	2	21	21	37	45	57	62	61	44	31	20	21	2
1894	25	18	21	34	45	46	58	57	55	38	23	10	10
1895	6	4	25	33	41	52	60	60	50	34	26	20	4
1896	14	8	23	31	46	58	63	56	43	36	29	17	8
1897	9	25	31	32	44	58	65	61	48	43	27	21	9
1898	16	14	28	30	41	56	61	66	51	36	24	14	14
1899	14	2	19	31	45	57	58	65	45	38	32	9	2
1900	11	11	23	30	46	57	62	65	52	38	29	21	11
1901	20	13	16	35	53	56	66	65	50	38	20	10	10
1902	17	17	20	32	47	57	64	59	49	38	31	17	17
1903	18	17	30	30	46	50	60	63	47	34	18	14	14
1904	13	15	25	31	49	52	63	54	43	36	29	20	13
1905	13	9	28	32	51	53	66	56	50	37	23	22	9
1906	23	15	25	34	38	57	64	70	57	31	28	17	15
1907	16	15	28	28	42	52	57	60	49	36	30	24	15
1908	19	16	24	35	38	57	63	57	47	40	30	26	16
1909	16	18	31	32	43	62	60	58	46	34	30	12	12
1910	22	18	29	36	42	49	60	63	51	30	30	20	18
1911	24	22	24	35	43	57	62	60	52	43	26	25	22
1912	6	14	25	39	49	50	64	56	53	40	25	23	6
1913	30	20	26	36	41	51	64	60	46	34	25	25	20
1914	19	15	19	30	45	59	55	62	48	32	17	15	15
1915	23	25	28	31	52	54	61	62	50	37	28	26	23
1916	16	9	23	35	52	58	64	63	45	38	24	20	9
1917	18	6	26	33	41	54	63	59	46	30	23	0	0
1918	6	15	30	32	41	55	57	56	43	42	32	24	6
1919	15	22	35	30	50	52	53	60	52	48	28	18	15
1920	10	16	17	30	41	57	56	59	53	35	26	25	10
1921	17	26	31	35	44	52	63	57	56	35	29	25	17
1922	18	13	30	39	46	61	62	53	54	42	25	23	13
1923	24	18	22	23	41	58	62	56	52	41	30	25	18
1924	7	22	25	31	46	57	61	60	46	36	28	17	7
1925	17	24	17	38	43	55	62	56	56	32	24	9	9
1926	18	23	16	31	43	52	58	64	57	36	25	16	16
1927	11	29	24	35	43	55	59	54	49	43	29	21	11
1928	8	22	29	32	43	54	64	61	47	36	23	25	8
1929	22	19	23	40	45	49	61	59	44	42	15	16	15
1930	19	22	22	38	46	52	62	58	58	34	19	21	19
1931	20	23	28	37	41	53	68	57	48	41	34	29	20
1932	30	30	16	38	48	59	61	62	52	41	22	17	16
1933	25	16	25	39	51	49	54	62	54	33	25	15	15
1934	8	8	20	35	45	60	68	56	55	34	26	18	8
1935	8	16	28	36	46	56	63	58	47	35	25	10	8
1936	9	14	32	30	49	54	56	61	48	38	23	25	9

Lowest Temperature - Raleigh, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Lowest
1937	34	21	20	37	38	60	61	62	51	33	22	18	18
1938	16	26	28	36	49	48	60	65	51	42	21	24	16
1939	25	20	27	35	34	67	63	60	56	37	30	27	20
1940	8	17	21	29	44	58	58	60	47	35	28	16	8
1941	17	21	23	40	38	54	64	53	50	41	27	23	17
1942	6	17	31	35	46	61	66	54	39	34	24	10	6
1943	16	12	13	29	39	63	60	57	44	35	28	12	12
1944	10	17	22	30	44	56	58	56	52	30	30	21	10
1945	23	13	36	34	40	47	60	56	56	38	23	16	13

EVAPORATION IN INCHES
MONTHLY AND ANNUAL

Floating Pan - Lake Michie, Durham, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Total
1927								5.69	5.00	3.55	2.44	1.73	
1928	1.10	1.17	2.24	3.13	5.02	5.79	6.79	5.59	3.76	3.31	2.94	1.44	42.28
1929	1.34	1.16	2.97	4.17	4.52	5.59	5.58	6.01	4.22	3.21	2.64	1.65	43.06
1930	1.38	1.48	2.75	3.50	5.76	5.67	6.71	6.61	4.75	4.34	2.34	1.58	44.87
1931	0.61	1.28	2.35	3.23	5.09	7.02	7.04	5.58	5.73	4.12	2.40	2.07	44.52
1932	1.49	1.95	3.02	4.16	5.47	5.84	8.01	6.24	5.40	3.86	2.80	1.76	50.00
1933	1.50	1.64	3.30	4.13	5.94	7.69	6.57	5.56	5.12	4.98	2.86	1.74	51.03
1934	1.38	1.54	1.86	3.63	5.09	5.19	6.78	4.82	3.56	4.44	2.46	2.11	42.86
1935	1.34	1.48	2.12	3.18	4.86	6.91	6.02	6.18	4.10	4.14	2.58		
1936			2.08	3.97	7.38	6.04	6.46	5.72	5.19	3.83	3.16	1.66	
1937	0.86	1.70	3.02	3.48	6.18	7.24	7.26	5.17	5.40	3.83	3.18	1.47	48.79
1938	1.57	1.37	2.69	3.96	6.09	4.63	5.00	7.04	4.85	4.15	2.92	2.16	46.43
1939	1.87	3.30	2.92	4.60	4.98	7.26	8.09	*7.29	6.09	4.72	3.24		
1940				*4.38	*5.75	6.01	6.24	5.93	5.58	3.58	3.38	2.29	
1941	2.11	2.09											
1942		1.38	1.69	4.00	4.41	6.37	4.76	5.48	5.86	3.59	2.54	1.36	
1943	1.77	2.37		4.03	5.45	6.60	6.14	7.02	5.79	4.35	3.25	1.80	
1944	1.40	1.35	1.98	3.85	5.70	7.55	6.33	6.40	4.57	4.03	2.87	2.42	48.45
1945	1.92	1.50	3.20	4.64	5.03	5.63	4.78	5.24	3.78	4.10	3.47	1.96	45.25

* Less than 5 days estimated

Analytical work to determine the composition of North Carolina's surface waters was first undertaken by the U. S. Geological Survey in 1906. At this time only one station was selected in the Neuse River Basin. Daily samples were collected; combined as 10-day composite samples, and analyzed over a period of a year. These analyses are presented herein.

No studies of note were undertaken by either the Department of Conservation and Development or the U. S. Geological Survey until 1925. At this time an agreement between the Water Resources and Engineering Division and the Quality of Water Division of the U. S. Geological Survey was initiated for a co-operative program of work. Under this agreement the personnel of the Surface Water Division of the U. S. Geological Survey was to collect samples as they traveled in connection with their other activities; and the Quality of Water Division of the U. S. Geological Survey agreed to undertake their analyses as its laboratory facilities would permit without cost to the State other than express on the shipment of samples.

Proceeding on that basis, several samples were analyzed during the years 1925-26, and the results of these determinations are presented herein. However, there was a limit to the number of samples that could be handled; and the unavoidable delay in rendering reports often caused embarrassment when the need for the information was urgent.

The increasing frequency with which urgent requests came into the Department for information relative to the quality of the water in almost every section of the State caused Director Wade H. Phillips to take note of the situation early in 1927. Director Phillips effected an agreement with E. E. Randolph, Professor of Chemical Engineering, State College of Agriculture and Engineering, Raleigh, N. C., whereby Dr. Randolph agreed to devote his time during the summer of 1927 to analytical work in connection with Water Analyses. Unfortunately, construction on the State College campus forced Dr. Randolph to work in an improvised laboratory, but too much cannot be said of the diligence and devotion of his application. This work during the summer provided several analyses, which, when added to a number previously analyzed by Dr. Randolph, increased the analyses in the files of the Department.

Again, in 1932 the need of chemical analyses of surface water became pressing. At this time an agreement was entered into with Mr. H. F. Crisco, a post-graduate of the University of North Carolina, to have more analytical done. His analyses are published in this bulletin. This agreement was carried on for only one school year, as it was not very satisfactory. Daily samples were to be collected; composites of 10-day samples were to be made and analyzed. It will be noted that these were not continuous, and are of very little value as a study during the whole period.

The need for information on the chemical contents of the waters of North Carolina continued to become greater, so in 1943 an agreement was made with the Quality of Water Division of the U. S. Geological Survey for a more complete study of the waters. A laboratory was established in Raleigh and a well planned study was started. Under this agreement the Department of Conservation and Development is to pay one-half the cost of the laboratory and the U. S. Geological Survey is to pay an equal amount. Although this agreement has been in operation for only a few years, much valuable information has been collected and will be found in this publication.

NEUSE RIVER NEAR HALLEIGH

Composites of Daily Samples by U. S. G. S.

Parts per Million

Dates of Collection	Suspended Matter	Silica SiO ₂	Iron Fe	Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulphate SO ₄	Chloride Cl	Nitrate NO ₃	Total Dissolved Solids	Turbidity
Oct. 1-10, 1906	13	25	.4	5.2	1.8	7.1			--	2.6	3.8	0.0	68	14
Oct. 11-20	11	27	.4	5.6	1.2	7.2			39	1.0	3.8	Tr.	66	66
Oct. 21-30	18	25	.4	6.0	1.2	7.9			44	1.2	4.6	0.0	68	24
Nov. 1-10	5.8	20	.4	7.2	1.8	8.2			39	3.0	5.0	.2	69	10
Nov. 11-20	7.6	21	.3	5.4	1.6	7.7			37	2.8	4.6	.2	63	11
Nov. 21-30	5.8	21	.3	6.0	2.0	8.2			40	2.8	5.2	Tr.	65	9
Dec. 1-10	3.8	22	.3	5.6	1.8	8.0			41	2.8	4.8	0.0	65	11
Dec. 11-20	16	22	.65	6.4	1.6	8.0			37	2.1	5.8	Tr.	68	26
Dec. 21-30	29	22	1.8	6.0	2.4	6.5			32	2.3	6.5	Tr.	74	45
Dec. 31-Jan. 9, 1907	9.0	21	.9	5.6	1.6	6.8			35	1.8	6.5	Tr.	68	17
Jan. 10-19	6.8	22	.8	6.8	2.8	7.9			39	3.5	5.9	Tr.	66	11
Jan. 20-29	3.4	21	.6	6.4	2.6	7.8			40	2.8	5.9	Tr.	65	8
Jan. 30-Feb. 8	10	20	.8	6.2	2.6	6.3			37	2.8	--	Tr.	67	16
Feb. 9-18	18	22	1.4	5.8	1.8	6.0			36	3.1	--	Tr.	72	29
Feb. 19-28	72	22	1.7	5.6	1.4	6.0			23	4.9	4.7	.7	79	--
Mar. 1-10	12	22	2.0	5.0	1.2	7.6			25	3.3	4.1	.5	76	33
Mar. 12-21	77	26	2.6	4.8	1.2	6.9			23	4.6	3.5	.6	85	--
Mar. 22-31	20	22	.6	6.0	1.8	6.8		*2.4	28	2.0	3.8	0.0	63	18
Apr. 1-10	45	16	1.3	5.8	1.6	8.2			33	4.1	5.0	.5	62	48
Apr. 11-21	19	39	1.2	6.8	1.8	8.8			40	3.6	5.4	.5	93	27
Apr. 22-May 2	73	23	2.0	6.4	1.7	8.8			32	4.8	4.2	1.0	77	81
May 3-12	67	28	2.1	6.0	1.4	9.3			32	3.5	4.6	.7	82	82
May 13-22	39	30	.95	6.2	1.8	11		*4.8	29	2.8	4.2	Tr.	78	28
May 23-June 1	57	22	.9	6.4	1.8	---			35	3.3	3.8	.9	66	53
June 3-12	96	32	1.7	5.4	.8	10			34	4.4	3.6	0.0	90	100
June 13-22	247	24	2.0	5.6	.8	8.2			28	4.3	3.0	1.2	79	325
June 23-July 2	280	39	3.7	8.2	2.0	12			50	3.6	4.6	Tr.	--	325
July 3-12	50	24	.9	6.6	--	9.1			37	3.5	3.6	0.0	71	48
July 13-23	333	24	1.8	4.8	--	8.5			35	3.3	3.0	Tr.	74	160
July 24-Aug. 1	82	24	1.5	6.4	3.0	6.3			37	3.9	3.2	.8	75	120
Aug. 3-12	428	43	5.2	3.8	1.9	5.4			18	7.6	3.2	.6	--	540
Aug. 13-22	26	32	2.2	5.8	--	5.7			30	3.8	3.2	.5	89	70
Aug. 23-Sept. 1	37	26	.66	6.8	--	---			38	4.6	4.2	0.6	75	40
Sept. 2-11	113	33	3.1	4.8	--	7.6			32	3.3	--	.6	--	170
Sept. 12-21	28	28	.8	6.4	3.4	9.4			44	3.6	4.2	.5	81	30
Sept. 22-Oct. 1	76	29	2.0	5.4	2.4	7.9			34	3.9	3.8	.5	84	120
Mean	68	26	1.4	5.9	1.8	7.9			35	3.4	4.4	.3	75	78

*Abnormal; computed as HCO₃ in the mean

Taken from U. S. G. S. Water-Supply Paper 236 page 83

NEUSE RIVER NEAR RALEIGH

Composites of Daily Samples by H. F. Crisco

Dates of Collection	Suspended Matter	Silica SiO ₂	Iron Fe	Calcium Ca	Magnesium Mg	Parts per Million							Total Dissolved Solids	Total Hardness CaCO ₃	Color	Turbidity	Alkalinity
						Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulphate SO ₄	Chloride Cl	Nitrate NO ₃					
Nov. 1-10, 1932	98	13	.20	5.2	3.0	5.8	1.5		17	5.9	4.5	.66	52	25	25	100	14
Nov. 11-20	65	15	.30	4.8	2.4	4.6	1.0		22	5.1	4.5	.44	60	22	25	120	18
Nov. 21-30	72	10	.1	4.4	1.2	3.6	1.7		15	4.6	4.5	---	51	16	40	120	12
Jan. 10-19, 1933	36	11	.02	3.4	1.6	4.9	1.0		15	4.6	3.8	.13	45	16	25	60	12
Jan. 20-28	188	13	.09	3.2	1.7	4.4	1.1		17	4.0	3.2	.55	44	15	25	200	--
Mar. 1-8	24	14	.05	4.0	1.1	5.6	1.2		24	3.1	4.2	.44	51	15	15	26	--
Mar. 9-18	43	15	.08	4.3	1.3	5.1	1.2		26	3.2	4.5	.44	53	16	15	45	--
Mar. 20-29	43	12	.05	4.7	2.1	5.5	1.4		25	3.6	4.8	.13	51	20	15	25	--
May 1-10	20	15	.06	4.7	2.2	6.8	1.7		29	3.1	5.0	.33	56	21	15	12	--
May 11-20	--	16	.06	4.7	2.0	7.0	1.6		27	3.7	4.0	.66	53	20	20	30	--
May 25-June 3	--	17	.09	5.2	2.2	9.5	1.3		20	4.6	6.7	.88	71	22	--	--	--

Neuse River near Clayton, N. C.

Location.- At gaging station at bridge on State Highway 42, 3 miles east of Clayton, Johnston County.

Drainage area.- 1,140 square miles.

Records available.- Chemical analyses: October 1943 to September 1944.

Water temperatures: October 1943 to September 1944.

Extremes, 1943-44.- Dissolved solids: Maximum, 101 parts per million Nov. 21-30; minimum, 47 parts per million Feb. 11-20.

Total hardness: Maximum, 26 parts per million Oct. 1-10; minimum, 14 parts per million Feb. 11-20, Mar. 11-20, 21-31, Apr. 11-20.

Water temperatures: Maximum, 86°F. June 18, July 26, 27, 28; minimum, 32°F. Dec. 19.

[Analyzed by Geological Survey]. Parts per million

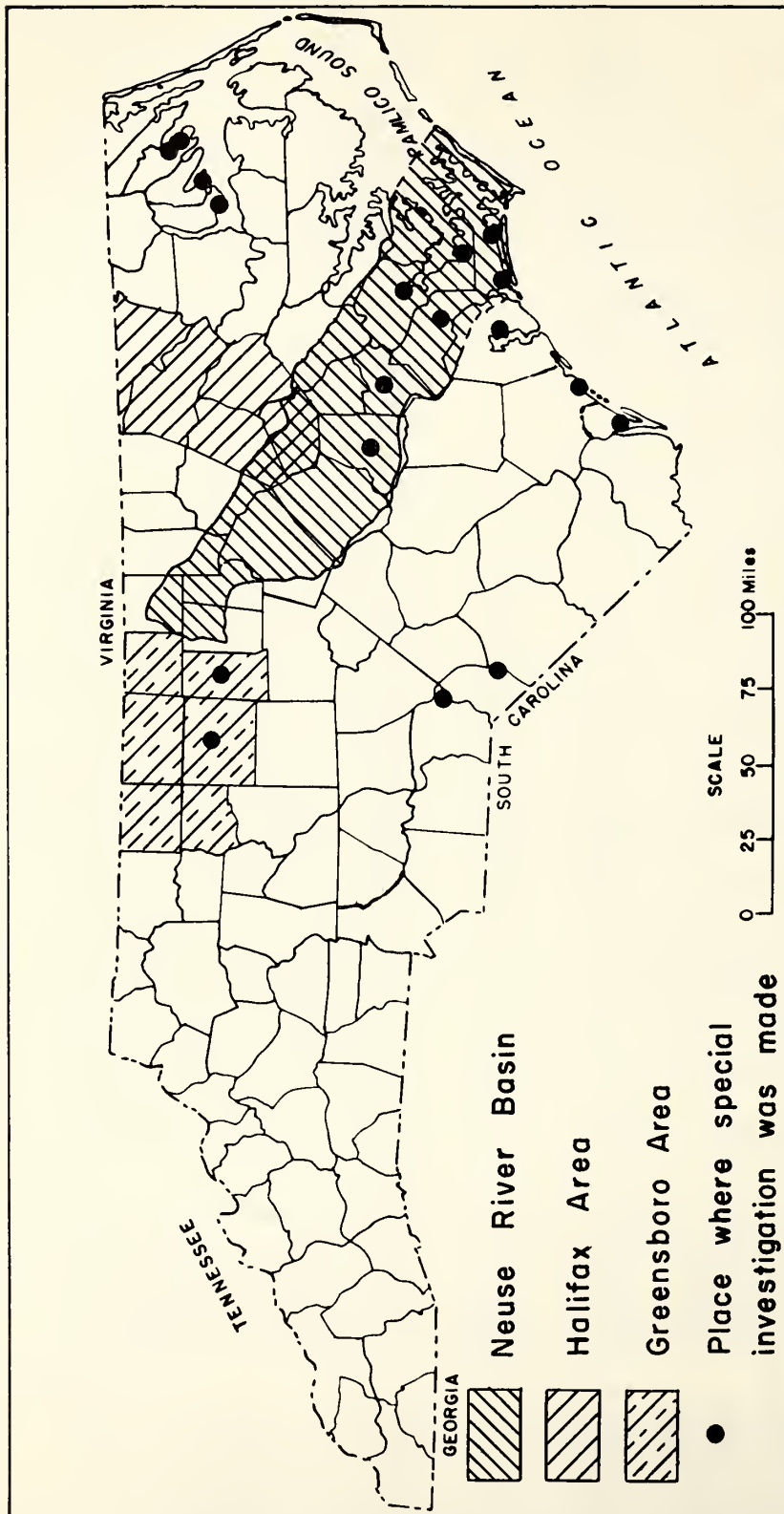
Date	Mean dis-charge (second-foot)	Tem-perature (° F.)	Sus-pended matter	Oxygen consumed		Sili-ca (SiO ₂)	Iron (Fe)	Cal-cium (Ca)	Mag-nesium (Mg)	So-dium (Na)	Po-tas-sium (K)	Bicar-bonate (HCO ₃)	Sul-phate (SO ₄)	Chlo-ride (Cl)	Fluo-ride (F)	Ni-trate (NO ₃)	Total dis-solved solids	Total hard-ness as CaCO ₃
				Unfil-tered	Fil-tered													
Oct. 1-10, 1943-----	107	66	7	5.5	5.7	17	0.03	6.7	2.3	15	3.2	42	5.3	14	0.1	3.1	94	26
Oct. 11-20-----	105	62	3	4.3	3.4	18	.06	6.0	2.2	14		36	4.9	12	.1	4.7	87	24
Oct. 21-31-----	170	58	14	4.7	3.6	21	.03	6.2	2.3	14		37	5.3	12	.1	3.1	89	25
Nov. 1-10-----	218	58	27	4.8	3.2	28	.02	6.2	2.2	14		36	4.6	11	.1	4.9	91	24
Nov. 11-20-----	192	48	22	4.2	3.6	42	.15	6.3	2.2	15		36	4.9	12	.1	6.5	95	25
Nov. 21-30-----	149	46	6	4.4	2.8	17	.02	6.4	2.2	17		36	6.3	13	.1	8.5	101	25
Dec. 1-10-----	173	49	19	3.5	2.5	13	.04	5.6	2.4	13		31	5.1	11	.1	7.7	87	24
Dec. 11-20-----	162	33	21	3.8	2.8	16	.07	6.1	2.3	15		34	5.8	11	.1	8.1	98	25
Dec. 21-31-----	521	38	76	4.8	3.2	22	.15	6.2	2.0	12	2.6	27	6.6	9.9	.1	7.9	84	21
Jan. 1-10, 1944-----	1,538	38	148	6.8	4.0	16	.12	4.7	1.8	6.5	2.0	15	8.2	6.5	.1	3.4	59	19
Jan. 11-20-----	2,161	38	95	5.5	3.9	23	.07	4.1	1.5	6.8		12	8.4	8.9	.1	3.2	56	16
Jan. 21-31-----	708	44	27	3.4	2.8	35	.16	4.4	1.7	8.4		18	7.4	8.0	.1	2.8	65	18
CO Feb. 1-10-----	556	44	51	3.8	2.4	16	.06	4.7	1.8	8.9		20	6.6	8.5	.1	3.8	67	19
CO Feb. 11-20-----	3,989	41	174	8.0	5.6	28	9.0	3.4	1.4	4.4		11	7.6	3.8	.0	1.9	47	14
Feb. 21-29-----	2,310	49	50	5.7	4.6	22	.04	3.4	1.5	6.4		13	7.4	4.5	.0	1.9	61	15
Mar. 1-10-----	1,873	47	105	5.2	4.1	15	.13	3.8	1.6	6.3		17	6.6	5.2	.0	2.0	55	16
Mar. 11-20-----	3,465	50	110	-----	-----	22	.11	3.5	1.4	6.2		14	6.5	4.0	.0	1.5	50	14
Mar. 21-31-----	4,147	52	69	5.6	5.0	27	.11	3.5	1.4	6.3		14	6.7	6.2	.0	1.2	61	14
Apr. 1-10-----	1,864	51	27	4.8	3.5	16	.03	3.7	1.4	6.0	1.2	18	6.0	4.6	.0	1.7	53	15
Apr. 11-20-----	4,405	61	28	4.9	5.2	28	.03	3.4	1.3	4.8	1.4	18	5.6	3.6	.0	1.4	48	14
Apr. 21-30-----	1,566	63	76	5.8	5.7	18	.13	3.8	1.5	6.5		22	4.9	4.5	.0	.4	54	16
May 1-10-----	1,143	65	77	5.9	4.6	17	.14	4.1	1.6	6.7		21	4.5	5.0	.0	3.1	56	17
May 11-20-----	585	72	32	5.0	3.3	14	.18	4.8	1.8	7.8		26	4.2	6.1	.0	2.7	65	19
May 21-31-----	586	79	67	5.4	5.4	18	.16	5.2	1.9	8.5		30	3.8	6.2	.1	2.1	69	21
June 1-10-----	374	79	34	4.9	3.3	13	.16	5.0	2.1	9.4		30	3.8	6.4	.1	4.6	70	21
June 11-20-----	306	83	32	4.4	3.6	14	.15	5.6	2.1	9.3		32	3.9	6.9	.1	3.2	70	23
June 21-30-----	169	84	9	3.8	3.2	8	.17	5.9	2.1	12	2.2	37	4.0	9.4	.1	3.8	79	23
July 1-10-----	129	84	5	3.6	3.2	12	.16	6.4	2.2	14	2.2	42	3.9	11	.1	3.7	84	25
July 11-20-----	1,221	79	164	7.1	5.0	18	.13	4.4	1.5	7.1	1.9	24	4.7	5.4	.1	1.7	60	17
July 21-31-----	548	83	108	6.7	5.0	18	.14	4.6	1.6	7.4		24	4.6	5.4	.0	2.6	61	18
Aug. 1-10-----	1,225	80	177	11	7.2	12	.03	4.0	1.5	6.3	1.8	19	4.8	4.1	.0	2.0	56	16
Aug. 11-20-----	282	77	9	6.4	4.6	16	.04	5.2	1.9	9.3		31	3.9	6.2	.1	3.2	71	21
Aug. 21-31-----	167	73	8	4.4	3.6	13	.16	6.4	2.2	12		38	4.1	8.2	.1	3.7	80	25
Sept. 1-10-----	117	78	4	3.9	3.5	13	.16	6.5	2.2	15		44	4.4	10	.1	2.6	86	25
Sept. 11-20-----	472	-----	93	6.8	4.6	12	.15	6.3	2.0	14		43	4.8	8.9	.1	2.5	81	22
Sept. 21-30-----	2,628	71	123	11	7.4	36	.03	3.6	1.4	4.1	2.2	18	4.1	3.5	.0	1.0	48	15
Average-----	1,114	-----	58	5.4	4.2	20	.06	5.0	1.8	10		27	5.4	7.6	.1	3.4	70	20

Source and Location	Date of Collection	Parts per Million											Total Hardness CaCO ₃	Color	Turbidity	Alkalinity	Authority
		Suspended Matter	Silice SiO ₂	Iron Fe	Calcium Ca	Magnesium Mg	Sodium Ne	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulphate SO ₄	Chloride Cl	Nitrate NO ₃				
Contentne Creek et Hookerton	10-26-44	26	8.0	.08	2.4	1.0	5.6			12	5.7	4.6	0.2	48	56	--	U.S.G.S.
Contentne Creek near Wilson	11-17-44	9	12	.17	2.7	1.2	6.6			20	2.9	4.6	.1	63	57	--	U.S.G.S.
Crabtree Creek at Lassiter's Mill	6-11-27	17	13	.3	6.2	1.3	1.6	1.4		18	4.6	4.8	.6	52	7.0	46	U.S.G.S.
Dial Creek near Bahama	1-23-26	11	23	1.3	3.8	1.7	4.6	0.6		14	8.6	4.5	.64	68	90	26	U.S.G.S.
Eno River at Hillsboro	7-14-29	--	16	.36	3.6	.3	5.6	1.3		13	8.0	6	.02	63	25	300	Bd. of Health
Flat River above Lake Michie	1-23-26	20	19	1.7	3.7	1.7	3.4	.6		11	7.1	4.1	1.7	66	120	35	U.S.G.S.
Flat River above Lake Michie	6-6-27	82	16	.7	6.2	1.8	3.8	.7		23	6.2	4.4	1.0	63	25	80	Randolph
Little Creek at Zebulon	1-30-28	139	17	1.5	2.9	1.2	4.9	1.0		16	6.0	2.5	1.3	69	12	110	U.S.G.S.
Little River near Princeton	7-14-44	5	8.0	.22	2.4	1.2	6.1			21	1.9	3.5	.2	44	11	18	U.S.G.S.
Little River west of Zebulon	7-12-29	47	8.7	.15	3.5	.9	4.5	2.4		19	2.3	6	.47	48	12	200	Bd. of Health
Middle Creek near Clayton	9-1-44	9	12	.07	2.8	1.3	5.2			21	2.1	2.9	.3	43	12	---	U.S.G.S.
Neuse River near Goldsboro	7-13-44	29	9.3	.11	5.0	2.0	10			34	3.7	7.5	1.0	62	21	---	U.S.G.S.
Neuse River at Kinston Gage	7-13-44	22	9.3	.04	6.3	1.8	9.2			30	5.8	7.0	.2	80	21	---	U.S.G.S.
Neuse River above New Bern	4-18-29	Tr.	12	.5	31	2.0	3.3			64	11	32	.02	144	86	31	Bd. of Health
Neuse River near Northside	10-23-44	43	8.6	.06	4.2	1.6	4.6			19	5.1	3.5	.8	49	17	---	U.S.G.S.
Neuse River near Raleigh	6-11-27	68	26	1.4	5.9	1.8	7.9	1.3		36	3.4	4.4	.3	73	---	78	---
Neuse River near Raleigh Hwy. #64	6-10-29	18	16	.36	6.4	1.6	2.5			16	3.2	7.2	.9	55	7	36	Randolph
Swift Creek near Raleigh	6-10-29	64	63	.18	6	.6	7.1			17	7.6	8	.01	109	12	60	Bd. of Health
Walnut Creek near Raleigh	6-10-29	30	10	.2	4	1.7	8.5			18	7.4	8	.03	69	13	100	Bd. of Health

PUBLIC WATER SUPPLIES IN NEUSE RIVER BASIN

Finished Water

Source and Location	Date of Collection	Parts per Million											Total Dissolved Solids	Total Hardness CaCO ₃	Color	Ph	Authority
		Suspended Matter	Silice SiO ₂	Iron Fe	Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO ₃	Bicarbonate HCO ₃	Sulphate SO ₄	Chloride Cl	Fluoride F				
Apex	6-10-46	--	4.2	.02	19	1.5	6.1		--	20	31	11	.0	.7	96	64	U.S.G.S.
Durham	5-22-31	--	13	.02	11	1.6	4.2	.9	--	28	15	3.3	--	.20	64	34	U.S.G.S.
Goldsboro	9-18-31	--	16	.03	16	1.0	4.3	1.4	--	22	28	4.0	--	.30	83	42	U.S.G.S.
Kinston (170 ft. well)	2-19-26	--	18	.15	17	8.1	16	8.7	--	136	3.9	3.5	--	.21	141	76	U.S.G.S.
Kinston (190 ft. well)	2-19-26	--	13	.08	2.1	2.4	38	6.2	4.8	102	3.5	6.5	--	.26	130	16	U.S.G.S.
Kinston (662 ft. well)	2-19-26	--	15	.41	.8	.6	79	3.2	7.2	116	14	44	--	.06	234	4.5	U.S.G.S.
Kinston (362 ft. well)	7-13-27	4	6.5	.01	5.2	2.1	13	1.6	2.0	43	4.8	10	--	.35	89	22	Randolph
Kinston (tap)	5-23-31	--	18	.03	17	7.3	19	9.9	--	142	5.0	3.5	--	.50	147	72	U.S.G.S.
New Bern	9-29-44	--	13	.69	66	1.3	7.6		--	201	10	7.8	.1	.0	209	170	U.S.G.S.
Raleigh	5-6-27	1	8.2	.2	5.0	1.0	1.6	.9	--	19	2.1	2.6	--	.15	42	17	Randolph
Raleigh	10-3-44	--	4.9	.07	11	1.1	6.4		3.9	19	16	3.1	.1	.4	59	32	U.S.G.S.
Raleigh	12-10-28	--	14	.32	6.1	1.2	1.8	1.0	--	19	4.1	4.6	--	.7	22	22	Randolph
Roxboro	2-13-29	--	12	.06	2.4	1.3	1.4	1.1	--	28	8.3	5.6	--	.01	45	11	Bd. of Health



Map of North Carolina showing where ground-water investigations have been made.

Ground Water in the Neuse River Basin, North Carolina

by M. J. Mundorff ^{1/}

INTRODUCTION

In August, 1941, the North Carolina Department of Conservation and Development in cooperation with the U. S. Department of the Interior, Geological Survey, began an investigation of the ground-water resources of North Carolina. The program is under the direction of Dr. J. L. Stuckey, State Geologist of North Carolina, and Dr. O. E. Meinzer, Geologist in Charge, Division of Ground Water, U. S. Geological Survey.

Detailed field work has been completed in 15 counties and a large amount of information has been obtained in other areas. During the war a number of investigations were made for military establishments and in defense areas. Figure 1 shows the areas and places where ground-water investigations have been made. A report giving information on the ground-water resources of the entire State has recently been published^{2/} and reports on the ground-water resources of the Halifax area and the Greensboro area have been prepared (see figure 1).

Ground water is an important natural resource in the Neuse River basin. It is the source of supply for 26 cities and towns and a number of military establishments in the basin. Nearly all domestic water supplies and many industrial water supplies are obtained from wells.

Although a systematic survey of the ground-water resources has been completed in only a few places in the basin, considerable valuable data have been obtained and it is believed that this should be included with the report on the surface-water resources of the basin. This report on the ground-water resources of Neuse River basin is actually a preliminary report. More detailed reports will be made as the investigations continue.

The Neuse River basin lies in two major physiographic provinces which not only differ greatly in topography and geology but also in ground-water resources.

The headwaters of the Neuse, including approximately the northwestern two-fifths of the basin are in the Piedmont province. The remainder of the basin, which contains the lower reaches of the river, is in the Coastal Plain province.

The two provinces are separated by a belt, usually several miles wide, known as the Fall Zone. In this zone the geology and topography of the Piedmont gives way to the geology and topography of the Coastal Plain. The gentle southeastward slope of the surface in the Piedmont increases considerably in the Fall Zone, but in the Coastal Plain decreases to less than half the slope of the surface in the Piedmont province.

^{1/}Associate Geologist, Ground Water Division, U. S. Geological Survey.

^{2/}Mundorff, M. J., Progress report on ground water in North Carolina, N. C. Dept. of Cons. and Dev., Bull. 47, 1945.

Occurrence of Ground Water

The source of ground water is precipitation as rain or snow. The water falling on the earth's surface enters and moves through the soil, and in the unconsolidated sedimentary formations of the Coastal Plain, through the openings between the grains of soil, sand, and clay. In the crystalline and consolidated rocks of the Piedmont the water moves through joints, fractures, cleavage planes, and similar openings.

Ground water moves because of gravity and the point of discharge is always at a lower level than the point of recharge. In North Carolina recharge occurs in interstream areas and the natural discharge is into streams, lakes, swamps, and the sea.

Rain falling on the surface percolates downward through the earth until it reaches the zone of saturation, below which the pores and openings of the rock are completely filled with water. The surface of the zone of saturation is called the water table, and, in the Neuse River basin, generally is from a few feet to about 60 feet below the surface. Discharge of ground water is a continuous process so that ground-water levels are receding except during and immediately following a period of rainfall, at which time the ground-water supplies are replenished. For these reasons the water table is not a fixed surface but is continually fluctuating.

Fluctuations of the water table.- Because the source of the ground water is precipitation, the water table fluctuates with the rainfall. The correlation of ground-water level with rainfall is complicated by a number of factors. The proportion of rainfall that becomes direct stream run-off, that evaporates, and that reaches the water table, is determined by the intensity and duration of the rainfall, by the character and condition of the surface material on which the rain falls, and by the rates of evaporation and transpiration of the water.

In North Carolina the water table generally recedes during the summer and autumn months in spite of heavy rainfall, because of the large amount of water lost by evaporation and transpiration. In the winter and spring months the water level generally rises, although rainfall is less, because evaporation and transpiration losses are greatly reduced.

Observations of the fluctuations of the water level of 2 wells in Neuse River basin have been made since 1932, and of 1 well since 1941. The records of all measurements made up to the year 1945 is contained in U. S. Geological Survey Water-Supply Papers 777, 817, 840, 845, 886, 907, 937, 945, 987, 1017. The depth of the water level, below the land surface datum, near the first part of the month, in each of these wells, is given in the following tables:

Brick Pit Well near Goldsboro, North Carolina

Brick Pit well. About 3.5 miles south of Goldsboro, 200 feet east of U. S. Highway 117 and Neuse River. Open, abandoned borrow pit. The datum is approximately at the land surface.

Water level, in feet below land-surface datum
near first of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1932						3.70	4.18	4.88	5.38	5.78	5.70	4.92
1933	3.58	2.96	2.30	2.70	2.12	2.72	3.76	4.38	4.44	5.00	5.46	5.78
1934	6.10	6.28	6.22	5.48	4.82	4.80	3.60	1.92	2.76	3.06	4.78	4.08
1935	----	1.34	1.82	2.26	2.56	3.28	4.08	3.90	4.04	3.32	3.96	4.34
1936	3.56	0.66	0.66	0.78	0.70	2.16	1.60	1.70	2.44	3.12	3.10	2.64
1937	0.70	0.52	0.72	1.46	0.72	----	2.56	3.16	2.58	2.90	3.82	4.00
1938	4.02	3.72	4.02	4.12	2.90	2.38	3.48	3.52	3.36	2.64	3.33	3.90
1939	4.06	3.49	0.34	0.88	1.94	2.64	3.20	2.86	1.72	1.88	2.80	3.38
1940	3.82	3.80	3.32	3.22	3.26	3.72	3.55	4.12	2.68	3.50	4.08	4.42
1941	4.48	4.38	3.84	3.02	3.04	3.80	3.50	1.90	3.08	4.02	4.62	5.03
1942	5.22	5.28	4.90	3.42	3.62	4.20	4.54	4.72	4.04	4.20	0.90	1.80
1943	2.20	0.52	1.86	1.52	1.64	2.58	3.02	4.14	3.74	4.30	4.88	5.20
1944	5.16	3.68	2.58	0.42	1.00	1.94	3.04	3.32	3.78	4.32	4.42	4.40
1945	2.98	3.20	3.50	4.82	3.20	2.98	2.50	3.10	4.54	----	5.96	5.32
1946	5.60	5.96	5.86	5.54	5.08	4.76	4.63	4.70	4.40	3.96	3.72	3.52

Fishdam Well near Northside, North Carolina

Fishdam well. One mile downstream from bridge across Neuse River on U. S. Highway 15 and about 2 miles west of Northside, on left bank of river. Land-surface datum is approximately at the land surface.

Water level, in feet below land-surface datum
near first of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1932							7.95	11.33	12.00	12.50	10.70	7.55
1933		5.10	6.33	6.80	7.68	9.58	11.15	11.70	11.13	12.37	12.70	12.60
1934	13.18	13.16	9.41	7.03	7.32	7.15	9.48	8.50	8.40	7.22	9.55	5.48
1935	6.48	6.50	7.00				9.38	8.74	10.74	10.03	10.69	8.32
1936	5.11		9.93		6.02	8.70	8.63		8.78	8.19	7.70	7.79
1937	3.97	3.72	3.97	5.13	3.95	5.28		8.30	4.63	7.74	7.50	7.11
1938		4.40	5.85	8.68	5.68	5.67	6.11	4.02	8.25	9.66	10.15	6.00
1939	5.38		3.63	3.97	4.17	9.68	11.11	10.58	9.62	12.76	14.02	13.46
1940	10.73	8.89	9.30	8.85	8.55	9.11	13.25	13.43	13.55	14.22	15.00	12.16
1941	9.11	9.98	10.12	8.85	9.42	12.68	11.58	13.13	14.84		15.77	16.03
1942	16.09	16.03	13.66	10.76	12.15	10.98	13.19	12.79	13.13	14.00	9.66	8.58
1943	9.03	8.50		9.13	9.30	11.70	13.13	14.30	14.98	15.37	15.77	16.03
1944	15.84	9.78	10.00	7.68	8.62	12.24	14.62	13.02	14.48	3.82	12.22	10.00
1945	7.97	7.61	9.76	7.20	6.66	4.72	2.93	5.20	7.40	9.22	7.42	7.15
1946	4.89	3.60	4.87	6.57	4.37	3.85	4.07	7.60	9.95	9.94	5.22	6.24

Geo. E. Weeks. At southeastern edge of Maysville. Land-surface datum is approximately at the land surface.

Water level, in feet below land-surface datum
near first of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1941								6.70		8.66		
1942		2.07	1.74	2.30	7.00	8.40	7.80	8.95	6.70	5.90	3.20	6.90
1943	1.5	1.7	4.1	2.0	4.0	2.8	0.9	3.1	3.5	7.5	9.2	9.2
1944	1.05	2.8	2.0	0.9	3.9	7.0	8.2	6.7	5.1	4.2	5.4	2.1
1945	2.8	4.9	2.1	6.1	8.1	7.8	1.7	1.1	0.7	3.0	4.9	3.2
1946	0.7	2.0	0.9	4.9	6.1	4.4	1.5	0.9	3.6	2.7	4.9	4.8

GEOLOGY AND GROUND-WATER RESOURCES OF THE PIEDMONT AREA

Parts of Person, Orange, Durham, Granville, Franklin, Wake, Johnson, Nash, and Wilson Counties are included in the Piedmont area of the Neuse River basin.

The rocks of the Piedmont area are crystalline rocks, including granites, gneisses, schists, and slates; and consolidated sedimentary rocks, consisting of sandstones, shales, and conglomerates. These rocks crop out in northeastward trending belts extending nearly at right angles across the basin. The areal geology, shown in figure 2, is based on field observations by J. L. Stuckey and M. J. Mundorff. The geology of the area has not been mapped in detail and it is probable that each of the formations, as shown on the map, contains small areas of other formations.

The age of most of the formations is uncertain. Most of the gneisses, schists, and slates are believed to be of pre-Cambrian age, although some of them may be younger. Much of the granite is thought to be of Carboniferous age. The belt of sandstones, shales, and conglomerates extending from Granville County, through Durham and Wake Counties, is of Triassic age.

In the crystalline and consolidated sedimentary rocks of the Piedmont section, ground water occurs in joints, fractures, cleavage planes, bedding planes, planes of schistosity and similar openings; and drilled wells obtain their water from these openings. It is obvious that the well encountering the most and largest openings will usually yield the most water. The most important problem therefore is to choose the best locations for drilling wells. Not only do the different kinds of rock differ in their productiveness, but each kind of rock ranges widely in yield from place to place.

Data obtained in the Halifax and Greensboro areas indicate that the slates and schists which have generally been included in the Carolina slate-belt are the best aquifers in the Piedmont. However, the tuffs included in that belt are generally less satisfactory than other types of slates and schists. The gneisses appear to rank second in productiveness, and the granites and the Triassic rocks are somewhat less productive.

EXPLANATION (Coastal Plain Area)

PLEISTOCENE FORMATIONS: Arenaceous clays, argillaceous sand and some clean sand and gravel. Deposits generally 20 to 30 feet thick. Many small domestic supplies. Larger supplies available by using groups or batteries of wells. Supplies up to 1,000,000 gallons a day available in some places by using large groups of shallow wells. Water soft at most places. Water from many wells contains considerable iron.



CASTLE HAYNE MARL: Sandy marls, sandy limestone and limestone. The formation is thin in the area of outcrop but becomes thicker to the south-east. Strata dip southward about 15 feet per mile. Large amounts of water are obtained from wells in Groven and Carter Counties and the eastern part of Jones County. Many wells yield several hundred gallons a minute. Water is generally hard.

YORKTOWN FORMATION and DUPLIN MARL: Colorous clays, sandy marls, sands and limestones. Strata dip southward a few feet per mile and are a few feet to about 20 feet thick. Only moderate yields in area of outcrop, but farther southward the strata are thicker and a number of wells yield several hundred gallons a minute, each. Water generally hard, at places high in iron.



REEDEE FORMATION: Marine clays, sandy marls and limestones dipping southward 10 to 25 feet per mile. Yields water to drilled wells in area of outcrop and in area extending about 20 miles to the southeast. Wells yield 100 gallons a minute at many places, and several hundred gallons a minute at some places. Water moderately hard to hard.

TRENT MARL: Sandy marls, sands, limestone and coquina. Strata a few feet to more than 300 feet thick, dip southeast about 10 feet per mile. Large amounts of water are obtained from wells in the Trent marl. Wells at some places yield 1,000 gallons a minute. Water is hard, contains iron at places.



BLACK CREEK FORMATION: Black laminated clays and interbedded fine-grained gray sands dipping 10 to 25 feet per mile to the southeast. Yields water to many wells in area of outcrop and in area extending 15 miles to the south-east. Many wells yield 100 to 300, some 500 to 800 gallons a minute. Water usually soft, except from upper strata.

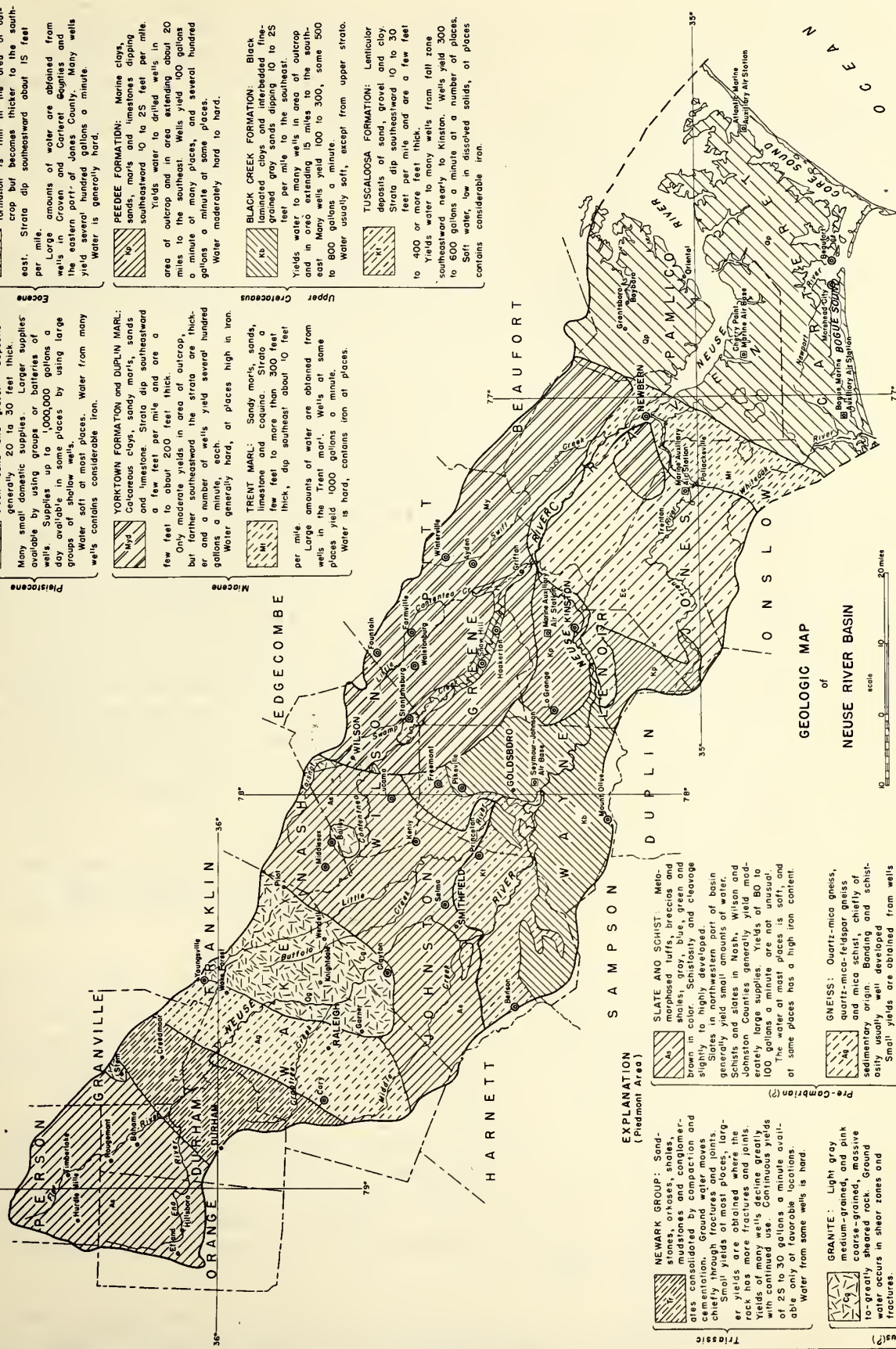
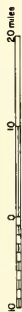
TUSCALOOSA FORMATION: Lenticular deposits of sand, gravel and clay. Strata dip southward 10 to 30 feet per mile and are a few feet to 400 or more feet thick. Yields water to many wells from fall zone southward nearly to Kinston. Wells yield 300 to 500 gallons a minute at a number of places. Soft water, low in dissolved solids, at places contains considerable iron.



REEDEE FORMATION: Marine clays, sandy marls and limestones dipping southward 10 to 25 feet per mile. Yields water to drilled wells in area of outcrop and in area extending about 20 miles to the southeast. Wells yield 100 gallons a minute at many places, and several hundred gallons a minute at some places. Water moderately hard to hard.

GEOLOGIC MAP of NEUSE RIVER BASIN

© Municipal ground water supply
 □ Military Base ground water supply



NEWARK GROUP: Sandstones, arkoses, shales, and mudstones. Compaction and chertification. Ground water moves chiefly through fractures and joints. Small yields of most places, larger yields are obtained where the rock has more fractures and joints. Yields of many wells decline greatly with continued use. Continuous yields of 25 to 30 gallons a minute available only from some localities. Water from some wells is hard.



SLATE AND SCHIST: Metamorphosed tuffs, breccias and mudstones. Shales, gneisses and mica schists. Cleavage slightly to highly developed. Slates in northwestern part of basin generally yield small amounts of water. Schists and slates in Nash, Wilson and Johnston Counties generally yield moderately large supplies. Yields of 80 to 100 gallons a minute are not unusual at the western end of the basin, and at some places has a high iron content.



GNEISS: Quartz-mica gneiss, quartz-mica-feldspar gneiss and mica schist, chiefly of sedimentary origin. Gneisses and schists usually well developed. Small yields are obtained from wells drilled at unfavorable locations. Yields of 40 to 50 gallons a minute are obtained where the schistosity, cleavage and shear planes are well developed. The water is generally soft and has a low iron content.



GRANITE: Light gray medium-grained, and pink coarse-grained, massive to-greasy, brecciated, and fractured. Massive granite yields small amounts of water, sheared phases yield larger amounts. Wells at favorable locations yield 30 to 50 gallons a minute. Water from some wells is slightly hard.



Factors to be considered in selecting a well site include texture of the rock, jointing, fracturing, shearing, bedding planes, cleavage and schistosity, dikes, veins, depth of weathered mantle, and topographic location.

Generally the coarser textured rocks are more productive than fine-textured ones, probably because shearing of the coarse-grained rocks makes larger openings than shearing of the fine-grained ones. Wells drilled where joints and fractures are closely spaced usually are much more productive than wells drilled in less broken rock. Bedding planes frequently are important openings for the occurrence and movement of ground water in rocks of sedimentary origin. Cleavage planes and planes of schistosity are important avenues for the movement of ground water in many metamorphic rocks. Places where these planes are closely spaced generally are more productive than places where they are widely spaced.

Quartz is a hard brittle mineral fracturing easily and breaks into relatively large irregular fragments when subjected to earth stresses. Ground water can usually move much more readily through quartz veins than in the adjacent rock; therefore, a well intersecting quartz veins usually is much more productive than one which does not intersect veins.

Wells drilled into rock adjacent to dikes often are better than average, because the dike fractures and breaks the rock into which it was injected.

At many places the thick layer of weathered mantle covers the underlying rock so that little direct evidence is available regarding jointing, fracturing, cleavage, and the other geologic factors discussed above. However, topography frequently gives indirect evidence. In an area being actively worn down by erosion as is the Piedmont of North Carolina, hills are left because they are more resistant to erosive forces. Valleys, draws, and similar depressions are formed at less resistant places. At many places this lesser resistance is due to the greater fracturing and jointing of the rock permitting circulation of ground water, which, near the surface of the earth, promotes chemical decay. Obviously such places are more favorable for drilling wells than the hills which are underlain by less broken rock. In the Greensboro area the average yield of wells drilled in topographic depressions is more than three times that of wells drilled on hills. Another reason for a depression being a favorable location is that the natural movement of the ground water is toward the depression and away from hills.

Wells drilled where the weathered mantle is thick generally are much more productive than where it is thin. The thick layer of mantle may store large quantities of water which will supply the fractures in the underlying rock when the well is pumped.

Water from most wells in the Piedmont is soft and low in iron but from a few wells it is hard, and from a number of wells it contains considerable iron. The harder waters are apt to be from wells drilled in granite. At many places wells drilled in schist or slate yield water containing objectionable amounts of iron. Temperatures range from about 60° to 63° F.

Gneiss (pre-Cambrian?).- The gneiss crops out chiefly in a belt extending southward from Granville and Franklin Counties, through Wake County. It is chiefly a feldspar, mica gneiss with varying amounts of quartz. At many places the quartz is the most abundant mineral and the rock is a quartzite gneiss. Most of the gneiss appears to be of sedimentary origin. Although greatly metamorphosed the original bedding is apparent at many places.

The gneiss is about equal to the granite in the Neuse River basin as an aquifer but is not nearly as prolific a water producer as the eastern schist belt. The average yield of 26 wells in gneiss, tabulated in this report, is $26\frac{1}{2}$ gallons a minute. Yields of 40 to 50 gallons a minute probably can be obtained from the gneiss in the basin by careful selection of the well site; drilling the well in topographic depressions, and where the weathered mantle is thick. Places where the bedding planes of

schistosity are neither vertical nor horizontal, but have moderate dips, are most favorable.

Slate and schist (pre-Cambrian ?).— These rocks are chiefly of volcanic origin but include some consisting of mixtures of volcanic ash and land waste deposited under water. The rocks have all been metamorphosed and usually have a well-developed cleavage or schistosity. In the Neuse River basin these rocks crop out chiefly in two belts. The western belt extends northeastward from the Greensboro area where it was studied in some detail and the eastern belt extends southeastward from the Halifax area where it also was studied.

The western belt, in Orange and Person Counties consists chiefly of slaty tuffs and tuffaceous schists. They are light-colored fine-grained rocks, with a well-developed cleavage and schistosity. The average yield of 40 wells in this rock in the Greensboro area was 16 gallons a minute and the average yield of the 8 municipal wells in the area was 22 gallons a minute. The average yield of 14 wells tabulated in this report is 12 gallons a minute. The data obtained in the Greensboro area suggest that drilling beyond 250 or 300 feet is rarely advisable.

Care in selection of a well site is as important in the slate as it is in the granite. The most favorable locations are in topographic depressions, where the weathered mantle is thick. Quartz veins are an important indicator in this rock and some of the best wells intersect quartz veins between 100 and 250 feet below the surface.

The eastern belt extends southward from Nash County through the western part of Wilson County into Johnston County. The rock probably is chiefly of sedimentary origin, consisting of a mixture of volcanic ash, clay, and silt. The proportion of volcanic material is much less than it is in the western belt. The rock has been metamorphosed to a low rank schist consisting chiefly of chlorite, sericite, and quartz. Cleavage and schistosity are extremely well developed. The rock is bluish to greenish gray when fresh but changes to yellow, red, or purple when weathered.

This belt of schist is one of the most prolific aquifers in the Piedmont. The average yield of 128 wells in the Halifax area was 22 gallons a minute, more than twice that of the wells in granite in the Halifax area. Many of the best industrial and municipal wells in the Piedmont section of the Neuse River basin are drilled in this rock. The average yield of the 23 wells, tabulated in this report, in the eastern schist belt is $69\frac{1}{2}$ gallons a minute.

Quartz veins, as in the slate, are very important avenues for the movement of ground water and many of the best wells obtain their water from this source.

Granite (Carboniferous ?).— The granite is generally a light gray, fine to medium-grained rock, but in some places is pink in color and then is usually somewhat coarser grained. At many places the granite has been greatly sheared and is somewhat schistose or gneissic. At other places the granite is massive and areas of several hundred square yards exposed at the surface show few or no fractures and joints. The granite of Neuse River basin occurs chiefly in two northeastward trending belts as shown in figure 2.

Ground water in granite occurs chiefly in joints and fractures. Where such openings are numerous a drilled well will yield much more water than where they are few.

In the Halifax area, 78 wells drilled in granite have an average yield of $10\frac{1}{2}$ gallons a minute; and in the Greensboro area, 163 wells have an average yield of 12 gallons a minute. These figures include domestic, industrial, municipal, and public wells. In the Greensboro area, 26 industrial and municipal wells have an average yield of about 33 gallons a minute. The average yield of 16 wells drilled in granite in the Neuse River basin is 28 gallons a minute.

The average yield of wells can be increased considerably by a more careful selection of drilling locations, basing the choice on geologic and topographic evidence. Because the number and size of joints and fractures in granite decrease rapidly with increasing depth most wells in granite obtain a large proportion of their water at relatively shallow depths. Drilling beyond 250 or 300 feet is rarely advisable and wells with low yields at 150 or 200 feet have little chance of getting even moderate yields at greater depths.

Sedimentary rocks (Triassic).- The Triassic rocks crop out in a belt extending southward from Granville County, through Durham and Wake Counties. The rocks consist chiefly of red, yellow, and brown arkosic and argillaceous sandstones, shales, mudstones, and conglomerates. These rocks were deposited as sediments in a subsiding inland basin or trough and are very lenticular. They have been consolidated by compaction and cementation so that circulation of ground water between the grains is very limited. Most of the ground water moves along joints, fractures, and bedding planes.

At many places these rocks are among the poorest aquifers in the Piedmont, but at other places 30 or 40 gallons a minute can be obtained. The coarser grained strata usually yield more prolifically than the finer grained ones. Where the strata are greatly fractured, good yields are usually obtained. The many diabase dikes which have been injected into the Triassic rocks have broken the adjacent strata and wells drilled near these dikes generally yield much better than wells farther away. A number of wells drilled near dikes in the Camp Butner reservation had good yields. Wells drilled in the conglomerates along the eastern margin of the belt also usually have better than average yields. The yield of many wells in Triassic strata, which had large yields when completed, have declined greatly; some of them yielding only 20 or 25 percent of the amount originally tested. The reason probably is that considerable water is stored in the pores between the grains but circulation through these pores is slow. After exhausting this storage, most of the water flowing into the well must travel through joints and fractures.

The average yield of 19 wells in Triassic strata, tabulated in this report, is $15\frac{1}{2}$ gallons a minute. Most of these wells were drilled in favorable locations.

Public ground-water supplies in the Piedmont section

There are 13 municipal ground-water supplies in the Piedmont section of Neuse River basin.

Bailey, in Nash County, obtains its water from two wells in schist. One well is $246\frac{1}{2}$ feet deep and the other is 350 feet deep. Both wells are 8 inches in diameter and both yield about 25 gallons a minute. The town uses about 40,000 gallons of water a day. No treatment is required.

Benson, in Johnston County, obtains its water from a well 550 feet deep and 10 inches in diameter, drilled in rock which probably is schist. The well yields 240 gallons a minute. About 100,000 gallons are used daily. The water is not treated.

Cary, in Wake County, obtains its water from 4 wells ranging in depth from 220 to 320 feet and in yield from 20 to 40 gallons a minute. The wells are drilled in gneiss. Daily consumption averages 27,000 gallons. The water is not treated.

Clayton, in Johnston County, obtains water from 6 wells, ranging in depth from 300 to 350 feet and in yield from 20 to 60 gallons a minute. The wells are drilled in granite. Daily consumption averages about 80,000 gallons. The water is not treated.

Fremont, in Wayne County, obtains its water from 2 wells. The main supply is from a well 596 feet deep in schist, yielding 80 gallons a minute. The other, 40 feet deep in sands of the Coastal Plain, is gravel walled, and yields 23 gallons a

minute. Average consumption is about 50,000 gallons a day. No treatment is necessary.

Kenly, in Johnston County, obtains its water from 2 wells 70 feet deep yielding 50 gallons a minute each. These wells are drilled in schist. Consumption is about 15,000 gallons a day. The water is not treated.

Lucama, in Wilson County, obtains its water from a well 191 feet deep, in schist, yielding 100 gallons a minute. Daily consumption is about 15,000 gallons. The water is aerated over coke with the addition of lime, to remove the iron, and is filtered and chlorinated.

Middlesex, in Nash County, obtains its water from 2 wells, both about 103 feet deep and yielding 50 gallons a minute each. The wells are drilled in schist. Daily consumption is about 13,000 gallons. No treatment is necessary.

Pikeville, in Wayne County, obtains its water supply from 2 wells 254 $\frac{1}{2}$ and 200 feet deep drilled into schist, yielding 6 and 2 $\frac{1}{2}$ gallons a minute, respectively. Daily consumption is about 8,000 gallons. The water is not treated.

Princeton, in Johnston County, obtains its water supply from a well 140 $\frac{1}{2}$ feet deep drilled into schist, yielding 100 gallons a minute. Daily consumption averages about 15,000 gallons. No treatment is necessary.

Selma, in Johnston County, obtains its water from 2 wells 18 feet apart, which are not pumped simultaneously. The wells are 303 and 306 feet deep and each yields 200 gallons a minute. The wells are drilled in schist. Consumption is about 200,000 gallons a day. The water is treated with caustic soda and filtered to remove iron.

Wendell, in Wake County, obtains its water supply from 3 wells ranging in depth from 301 to 602 feet and in yield from 15 to 45 gallons a minute. The wells are drilled in granite. Consumption is about 100,000 gallons a day. No treatment is required.

Youngsville, in Franklin County, obtains its water from a well, drilled in gneiss, 245 feet deep, yielding 75 gallons a minute. Daily consumption is about 15,000 gallons. No treatment is necessary.

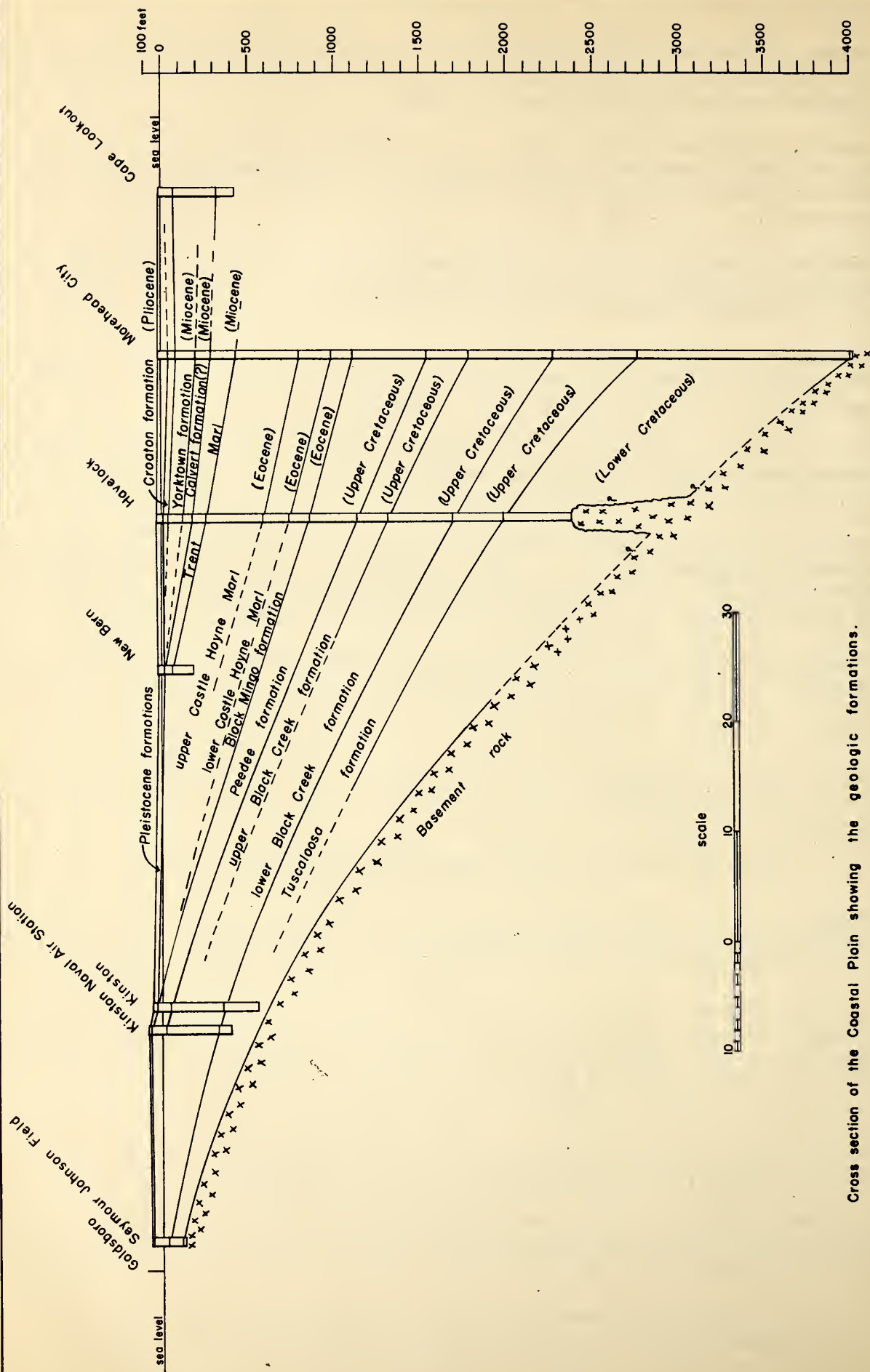
GEOLOGY AND GROUND-WATER RESOURCES OF THE COASTAL PLAIN

Counties partly or entirely within the Coastal Plain province in the Neuse River basin include Johnston, Wayne, Wilson, Pitt, Greene, Lenoir, Jones, Craven, Beaufort, Pamlico, Carteret, and Onslow.

The deposits of the Coastal Plain are very different from those of the Piedmont. They consist of unconsolidated sands, clays, and marls, semi-consolidated or consolidated limestones, occasional layers of sandstone, and considerable shale. The formations crop out as belts trending northeast and dipping at a low angle to the southeast, so that younger formations crop out successively in that direction.

At the Fall Zone the irregular surface of the granites, gneisses, slates, and schists of the Piedmont dips coastward beneath these sedimentary strata. The slope of this basement rock is only 15 or 20 feet per mile in the inner half of the Coastal Plain but increases to 40 or 50 feet per mile near the coast so that the sedimentary strata are progressively thicker towards the coast. The depth to the basement rock is about 4,000 feet at Morehead City.

The areal geology is shown in figure 2. Figure 3 is a cross section from Goldsboro to Cape Lookout showing the structure of the Coastal Plain.



Cross section of the Coastal Plain showing the geologic formations.

Most parts of the Coastal Plain will yield large quantities of water to wells. The total potential ground-water supply in the Coastal Plain section of the Neuse River basin is several hundred million gallons a day and individual supplies of several million gallons daily can be developed at many places. Individual wells have yielded 750 to 1,000 gallons a minute at several places.

The water from the western half of the Coastal Plain is generally soft, but that from the eastern half ranges from moderately hard to very hard. At some places the water contains objectionable amounts of iron. Temperatures range from about 62° to 65° F.

Upper Cretaceous Series

Tuscaloosa (?) formation.- This is the basal sedimentary formation of the Coastal Plain of this area and lies directly upon the irregular surface of the basement rock. The strata are lenticular at many places, and consist of white, red, yellow, and tan clay, sand, and some gravel, much of the sand and gravel being argillaceous. The Tuscaloosa (?) formation dips southeastward about 10 or 15 feet per mile in its area of outcrop but the dip increases gradually to the southeast and may be 30 feet or more per mile near the coast. The formation thickens from a feather edge along the Fall Zone to about 100 feet where it passes beneath the Black Creek formation. Farther down dip it becomes much thicker and is about 560 feet thick at Morehead City.

Many of the sand strata contain too much clay to be permeable, but clean, permeable sand strata occur at different depths at most places where the Tuscaloosa (?) is present. This formation is one of the best aquifers in the Coastal Plain and will yield several hundred gallons a minute to wells at almost any place except along its thin western margin.

Near the coast the water is too brackish for use. The contact between the brackish water and the fresh water in the Tuscaloosa (?) formation is between Kinston and New Bern and is probably much nearer New Bern than Kinston, where the depth to the top of the Tuscaloosa (?) is probably about 1,000 feet. Wells yielding 500 to 800 gallons a minute have been drilled at several places. In the Neuse River basin 6 towns obtain their entire supply from the Tuscaloosa (?) formation, and 1 town and a military base obtains part of their supply from it. The average yield of the 11 wells supplying these places is 277 gallons a minute. The potential supply from the Tuscaloosa (?) formation is many times the amount now being utilized.

Water from the Tuscaloosa(?) formation is generally soft and low in dissolved solids. At some places the water contains objectionable amounts of iron. Analyses Wilson County no 7, Wayne County no. 1, and Pitt County nos. 1 and 3, in the table of analyses are representative of water from the Tuscaloosa (?) formation.

Black Creek formation.- In a belt to the southeast of the Tuscaloosa (?) formation, the Black Creek formation crops out, or is covered only by thin layers of other formations. Farther to the southeast it dips beneath the Pee Dee formation.

The Black Creek formation consist typically of black laminated clays and interbedded, fine-grained gray sands. Lignitized wood is very characteristic of these strata. Near the top of the formation the strata contain glauconite and are somewhat calcareous, and some strata are consolidated to a calcareous sandstone or shell-rock.

The dip of the Black Creek formation ranges from about 10 to 25 feet per mile. The maximum thickness may be more than 600 feet.

The Black Creek formation is an excellent aquifer at most places and wells yielding 500 gallons a minute are not uncommon. The 18 wells supplying all or part of the water for 6 towns and 2 military bases within the basin yield an average of

281 gallons a minute. The potential supply from this formation is many million gallons a day, of which probably less than 10 or 15 percent is being utilized. The area in which wells can obtain water from the Black Creek formation extends from the western limit of its area of outcrop, nearly to New Bern. At New Bern and farther to the southeast the water is too brackish for use.

Water from the lower part of the formation is soft but that from the upper part is somewhat harder. The water contains objectionable amounts of iron at some places. Analyses Lenoir County nos. 5 and 7 are representative of water from the Black Creek formation.

Peedee formation.- The Peedee formation crops out in a belt to the southeast of the Black Creek, which it overlies. It consists of marine clays, sands, marls, and limestones. Many of these strata are glauconitic and some contain much shell. The dip of the formation ranges from about 10 to 25 feet per mile and the maximum thickness probably is more than 600 feet.

The Peedee formation is a good aquifer at most places, although not as important as the Tuscaloosa (?) and Black Creek formations. Wells yielding 100 gallons a minute probably can be obtained at many places between Kinston and New Bern and much larger yields might be obtained at some places. East of New Bern, water from this formation probably is brackish.

In general water from the Peedee formation is hard. Analysis Lenoir County no. 3 is typical of water from this formation.

Eocene Series

Castle Hayne marl.- This formation overlies the Peedee formation and crops out in a broad area between Kinston and New Bern. The dip of the formation is only a few feet per mile in this area and the maximum thickness does not greatly exceed 100 feet. Near New Bern, where it passes beneath the Trent marl, the dip increases and it becomes thicker. The maximum thickness probably is about 500 feet. The Castle Hayne marl consists of sand, sandy marls, sandy limestone, and some nearly pure limestone.

The formation yields large quantities of water at a number of places. The best aquifers are porous limestone and shellrock strata. The area in which the most prolific yields have been obtained is principally to the southeast of its area of outcrop. Large yields are obtained in eastern Jones and Craven Counties and in Carteret County. Large yields probably could also be obtained in Pamlico County. Three of the twelve supply wells at the Cherry Point Marine Base obtain their water from the Castle Hayne marl. The average yield is 332 gallons a minute with an average drawdown of 4.5 feet. Only a small fraction of the potential yield of this aquifer is utilized.

The water from the Castle Hayne is hard and at many places contains considerable iron.

Miocene Series

Trent marl.- The Trent marl crops out in a belt extending northeastward through Pollocksville and New Bern. It consists of sand, sandy marls, limestone with more or less sand, and coquina.

Many of the limestones and coquinas are very porous and permeable and yield large quantities of water to wells. Wells yielding more than 1,000 gallons a minute have been drilled at New Bern, and wells yielding several hundred gallons a minute with only a few feet of drawdown have been drilled at Pollocksville, Bogue, Cherry Point, Morehead City, and Atlantic. The potential supply is many millions of gallons a day of which only a small portion is being utilized. Water from the Trent marl is hard and at places contains considerable iron. Analyses Craven County no. 1 and Carteret County no. 4 are representative of water from the Trent.

Yorktown formation and Duplin marl.- The Yorktown formation and Duplin marl crop out in a considerable area, chiefly north of the Neuse River, extending from the Fall Zone to New Bern where they are overlain by Pleistocene deposits. They overlap all the older formations, described above, and range in thickness from a few feet to 40 or 50 feet. They consist of calcareous clays, sandy marls, with some beds of clean sand, and occasional limestone layers.

The Yorktown and Duplin unit is unimportant as an aquifer in its area of outcrop, but east of New Bern, where it is overlain by younger formations, becomes thicker and furnishes moderate to large supplies of water. Wells at Cherry Point, Newport, Bogue, Morehead City, and at many other places in Craven, Pamlico, and Carteret Counties obtain water from the Yorktown and Duplin unit.

Yields of 200 to 300 gallons a minute have been obtained at a number of places.

Water from the Yorktown and Duplin formations is hard and often contains considerable iron. Analysis Craven County no. 6 is of water from this unit.

Pleistocene Series

Pleistocene deposits.- The area shown on figure 2 as Pleistocene includes that part of the Pleistocene which is comparatively thick and completely covers all underlying formations and is only part of the area actually covered by Pleistocene deposits. Nearly all of the rest of the Coastal Plain province is covered by a thin veneer of Pleistocene sediments, 20 or 25 feet thick, lying unconformably upon all older formations. The surfaces of these Pleistocene deposits form the Coastal Plain terraces. The deposits consist of arenaceous clay, argillaceous sand, and some clean sand and gravel.

Many domestic water supplies and a number of industrial supplies are obtained from the Pleistocene deposits. The yield of an individual well is usually small, but batteries of small diameter wells furnish moderate supplies. Supplies up to 1,000,000 gallons a day can be obtained at some places in the Neuse River basin and smaller supplies can be obtained at many places.

Water from these deposits in the western half of the Coastal Plain is generally soft, but the water from them in the eastern half is hard at a number of places. The water also often contains a considerable amount of iron.

Public Ground-Water Supplies in the Coastal Plain

Stantonsburg, in Wilson County, obtains water from sand of the Tuscaloosa formation from a gravel-walled well 120 feet deep which yields 300 gallons a minute. Consumption of water averages about 13,000 gallons a day. The water is not treated.

Walstonburg, in Greene County, also obtains its water from sand strata of the Tuscaloosa formation. The well is 240 feet deep, gravel walled, and yields 75 gallons a minute. Average water consumed is about 7,000 gallons daily. The water is not treated.

Snow Hill, in Greene County, obtains its water from a well, 260 feet deep, ending in sand of the Black Creek formation. The well is 6 inches in diameter and yields 80 gallons a minute when flowing and 290 gallons a minute when pumped. About 40,000 gallons of water are used daily. The water is not treated.

Hookerton, in Greene County, obtains its water from four flowing wells, in the Black Creek formation, which are about 100 feet deep and $1\frac{1}{4}$ to 4 inches in diameter. They yield about 15 gallons a minute, each. The water is not treated.

La Grange, in Lenoir County, obtains its water from a gravel-walled well 332 feet deep, yielding 175 gallons a minute. The water comes from sand strata of the Tuscaloosa (?) formation. Daily water consumption is about 50,000 gallons.

Kinston, in Lenoir County, obtains its water from sand in the Black Creek formation through three gravel-walled wells which are about 375 feet deep and yield 460 to 900 gallons a minute, each. About 1,000,000 gallons of water are used each day. Chlorination of the water is the only treatment.

Fountain, in Pitt County, obtains water from a well 193 feet deep, ending in sand of the Tuscaloosa (?) formation. The well yields 160 gallons a minute. Water used averages about 10,000 gallons a day. The water is not treated.

Farmville, in Pitt County, has three gravel-walled wells drilled in sands of the Tuscaloosa (?) formation. The wells average about 480 feet deep and range in yield from 130 to 500 gallons a minute. About 150,000 gallons of water are used daily. The water is not treated.

Winterville, in Pitt County, obtains water from 2 wells, in sand of the Black Creek formation, one of which is 157 feet deep and yields 80 gallons a minute and the other of which is a gravel-walled well 306 feet deep, yielding 400 gallons a minute. About 25,000 gallons of water are consumed daily. The water is chlorinated and softened with zeolite.

Ayden, in Pitt County, obtains water from sands of the Black Creek formation. The principal well is 152 feet deep, gravel walled, and yields 200 gallons a minute. Daily consumption is about 80,000 gallons. The water is not treated.

New Bern, in Craven County, obtains its water from 8 wells drilled in limestone of the Trent marl. The wells average about 100 feet deep, are gravel walled, and yield 250 gallons a minute, each. Consumption averages about 2,000,000 gallons a day. The water is chlorinated.

Morehead City, in Carteret County, obtains its water from four wells drilled in limestone of the Trent marl. Average depth is about 250 feet. The wells will flow at high tide and the four yield 750 gallons a minute to a centrifugal pump. Water consumption is about 350,000 gallons daily.

Beaufort, in Carteret County, obtains water from wells 300 and 440 feet deep which yield water from limestone of the Trent marl and from limestone possibly belonging to the Castle Hayne marl.

Seymour Johnson Field, an Army Air Base near Goldsboro, obtains water from five gravel-walled wells drawing from sands of the Black Creek and Tuscaloosa (?) formations. The wells yield from 250 to about 700 gallons a minute. Water consumption ranged from about 1,000,000 to 2,000,000 gallons a day while the base was occupied by the Army. The water is treated for the removal of iron and is chlorinated.

Cherry Point Marine Air Base, in Craven County, obtains its water from 12 wells averaging about 250 feet deep and having an average yield of 38 gallons a minute per foot of drawdown. The chief aquifer is the Trent marl. Daily consumption generally ranges from 1,000,000 to 1,500,000 gallons a day. The water is softened, filtered, and chlorinated.

The Naval Auxiliary Air Base, four miles north of Kinston, obtains water from two wells in the Peedee formation. These wells are 100 feet deep and yield 110 gallons a minute, each.

The Naval Auxiliary Air Base near Pollocksville obtains water from a well in the Trent marl. The well is 67 feet deep and yields 180 gallons a minute.

Typical Analyses of Water from Wells in the

Piedmont Province of the Neuse River Basin

Analysed by M. D. Foster, L. W. Miller, E. W. Lohr, M. S. Berry, W. L. Lamar, and J. James,

U. S. Geological Survey

(Well numbers correspond to the numbers in the tables of well data)

(Parts per million)

Source		Date	Sili- ca (SiO ₂)	Iron (Fe)	Cal- cium (Ca)	Mag- ne- sium (Mg)	Sodium and Po- tassium (Na+K)	Bicar- bonate (HCO ₃)	Sul- fate (SO ₄)	Chlo- ride (Cl)	Fluo- ride (F)	Ni- trate (NO ₃)	Dis- solved solids	Total hard- ness as CaCO ₃
County	Well No.													
Wake	28	Feb. 5 1946	33	.30	9.4	4.9	6.6	62	1.9	3.5	0.0	0.4	90	44
Franklin	2	Feb. 5 1946	34	.17	16	5.8	9.8	91	6.0	2.9	.0	.1	118	64
Nash	8	Nov. 17 1941	--	.05	9.7	3.4	7.2	57	2.8	3	0	0	87	38
Nash	1	Apr. 9 1943	22	.03	6.3	3.2	3.63	36	2.7	2.8	---	.5	59	29
Wilson	9	Jan. 27 1942	42	8.7	22	4.2	10	98	7.4	4	.4	0	136	72
Wilson	3	Jan. 23 1942	--	----	----	----	----	66	10	5	1.5	0	----	50
Wayne	12	Nov. 15 1943	--	.21	----	----	----	182	280	305	.3	--	----	354
Wayne	15	Nov. 15 1943	--	.19	----	----	----	138	5	14	.1	--	----	108

Typical Analyses of Water from Wells in the

Coastal Plain Province of the Neuse River Basin

Analysed by M. D. Foster, L. W. Miller, E. W. Lohr, M. S. Berry, W. L. Lamar, and J. James,

U. S. Geological Survey

(Well numbers correspond to the numbers in the tables of well data)

(Parts per million)

Source	County	Well No.	Date	Silica (SiO ₂)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na+K)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Dissolved solids	Total hardness as CaCO ₃
Wilson		7	Jan. 29 1942	23	2.0	19	11	36	174	11	12	0.2	0.25	199	92
Wayne		1	Feb. 20 1945	18	.71	5.4	1.6	9.2	29	7.6	5.8	.1	.0	64	20
Pitt		1	Dec. 9 1942	17	.21	44	8.9	60	132	9.5	112	.2	.2	345	146
Pitt		3	Nov. 16 1943	--	.23	----	----	----	244	30	98	1.0	----	----	16
Lenoir		5	July 13 1927	5.5	.1	5.2	2.1	15	47	4.8	10	----	.12	89	37
Lenoir		7	Dec. 7 1943	----	.04	2.0	1.2	74	181	4.5	11	.5	.3	--	10
Lenoir		3	Nov. 20 1943	----	----	----	----	----	164	2	4	.1	----	--	126
Craven		1	Sept. 29 1943	13	.69	66	1.3	7.5	201	10	7.8	.1	0	209	170
Craven		6	Oct. 21 1941	33	4.1	95	4.4	7.4	310	1.6	10	.6	.0	327	255
Carteret		4	Sept. 3 1941	--	----	----	----	----	365	1	8	.6	----	----	306

RECORDS OF WELLS IN THE NEUSE RIVER BASIN

No.	Location	Owner	Driller	Depth (feet)	Diam- eter (inches)	Depth of casing	Yield gallons per minute	Aquifer
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Person County

1	Hurdle Mills	R. H. Baynes	Dan. Well Co.	90			15	Slate
2	Hurdle Mills	C. E. Long	Heater Well Co.	60	6	50	12	Slate
3	Hurdle Mills	J. D. Woods	Heater Well Co.	73	6	69	15	Slate
4	Hurdle Mills	W. R. Hawkins	Heater Well Co.	70	6	50	5	Slate
5	Hurdle Mills	D. L. Whitfield	Heater Well Co.	59	6	26	15	Slate
6	Timberlake	Miss E. P. Walters	Dan. Well Co.	56	6		4	Slate
7	Timberlake	J. D. Veazey	Heater Well Co.	110	4	80	10	Slate

Orange County

1	Hillsboro	H. S. Cates	Heater Well Co.	70	6	43	8	Slate
2	Hillsboro	Coca Cola Plant	Heater Well Co.	53	6		10	Slate
3	Efland	School	Heater Well Co.	330	6	42	?	Slate
4	Hillsboro	Episcopal Church	Heater Well Co.	87	6	60 $\frac{1}{2}$	10	Slate
5	Hillsboro	Standard Oil Co.	Heater Well Co.	54	6	20	10	Slate
6	Hillsboro	T. L. Gravetle	Heater Well Co.	83	6	40	30	Slate

RECORDS OF WELLS IN THE NEUSE RIVER BASIN

No.	Location	Owner	Driller	Depth (feet)	Diam- eter (inches)	Depth of casing	Yield gallons per minute	Aquifer
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Granville County

1	Stem	W. L. Gentry	Heater Well Co.	63	6	52	20	Granite ?
2	Creedmoor	L. R. Coley	Heater Well Co.	100	5		5	Triassic rocks
3	Creedmoor	W. W. Whitfield	Heater Well Co.	57	5	40	1 $\frac{1}{2}$	Triassic rocks
4	Northside	Mrs. L. M. Wentworth	Heater Well Co.	232	6	32	40	Triassic rocks
5	Camp Butner	(Construction well)	Heater Well Co.	129	6		8	Triassic rocks
6	Camp Butner	(Construction well)	Heater Well Co.	117	6	17	45	Triassic rocks
7	Camp Butner	(Construction well)	Heater Well Co.	148	6		3	Triassic rocks
8	Camp Butner	(Construction well)	Heater Well Co.	87	6		3	Triassic rocks
9	Camp Butner	(Construction well)	Heater Well Co.	250	6		50	Triassic rocks
10	Camp Butner	(Construction well)	Heater Well Co.	145	6	18	10	Triassic rocks
11	Camp Butner	(Construction well)	Heater Well Co.	89	6	18	15	Triassic rocks
12	Camp Butner	(Construction well)	Heater Well Co.	142	6	40 $\frac{1}{2}$	25	Triassic rocks
13	Camp Butner	(Construction well)	Heater Well Co.	106	6	43 $\frac{1}{2}$		Triassic rocks

Durham County

1	Rougemont	Carver Lumber Co.	Heater Well Co.	101	6	31 $\frac{1}{2}$	5	Slate
2	Bahama	Fairntosh Farms	Heater Well Co.	100	6	32	20	Slate
3	Bahama	W. M. Bacon	Heater Well Co.	43	6	34	1	Granite
4	Durham	D. C. Belvin	Heater Well Co.	57 $\frac{1}{2}$	6		10	Triassic rocks
5	Durham	H. S. Garden	Heater Well Co.	76	4		10	Triassic rocks
6	Durham	J. E. Dickson	Heater Well Co.	50	6	33	4	Triassic rocks
7	Durham	Sharon Acres	Heater Well Co.	70	6	19 $\frac{1}{2}$	3	Triassic rocks
8	Durham	R. H. Wright	Heater Well Co.	148	6		16	Triassic rocks

RECORDS OF WELLS IN THE NEUSE RIVER BASIN

No.	Location	Owner	Driller	Depth (feet)	Diameter (inches)	Depth of casing	Yield gallons per minute	Aquifer
Wake County								
1	Wendell	Town	Va. Mach. Co.	301	8	90	45	Granite
2	Wendell	Town	Va. Mach. Co.	602	6		30	Granite
3	Wendell	Town	Heater Well Co.	301	8	90	15	Granite
4	Raleigh	Central Prison	Heater Well Co.	357	8	47?	57	Gneiss
5	Raleigh	Central Prison	Heater Well Co.	496*	8		60	Gneiss
6	Raleigh	Carolina Pines	Heater Well Co.	606			30	Gneiss
7	Raleigh	Carolina Pines	Heater Well Co.	150	8		12	Gneiss
8	Raleigh	Carolina Pines	Heater Well Co.	108	6	90	20	Gneiss
9	Raleigh	Carolina Equip. Co.	Heater Well Co.	112	6		18	Gneiss
10	Raleigh, north of	Crabtree Creek Park	Heater Well Co.	200	10	81	12	Gneiss
11	Raleigh, north of	Raleigh-Durham Airport	Heater Well Co.	252	8		30	Triassic rocks
12	Raleigh, north of	Raleigh-Durham Airport	Heater Well Co.	184	6	31	18	Triassic rocks
13	Wake Forest	Dr. N. Y. Gulley	Heater Well Co.	50	6	23	15	Gneiss
14	Raleigh	Dillon Supply Co.	Heater Well Co.	221	6		15	Gneiss
15	Raleigh	Montlawn Mem. Asso.	Heater Well Co.	258	6	36	40	Gneiss
16	Raleigh	State College	Heater Well Co.	325	6		30	Gneiss
17	Raleigh	State Highway Patrol	Heater Well Co.	122	4	95	10	Gneiss
18	Raleigh	Pine State Cream- ery	Heater Well Co.	410	8-6	56?	12	Gneiss
19	Raleigh	Raleigh Gas Co.	Heater Well Co.	351	6		31	Gneiss
20	Raleigh	State Highway Garage	Heater Well Co.	463	8-6	192	15	Gneiss

*No water in rock, casing blown at 55 feet to admit water from weathered material.

RECORDS OF WELLS IN THE NEUSE RIVER BASIN

No.	Location	Owner	Driller	Depth (feet)	Diam- eter (inches)	Depth of casing	Yield gallons per minute	Aquifer
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Wake County (cont'd)

21	Raleigh	W. P. T. F.	Heater Well Co.	110	6	54½	20	Gneiss
22	Raleigh	R. & S. Packing Co.	Heater Well Co.	75	8	60	30	Gneiss
23	Holland	School	Heater Well Co.	200	6		10	Gneiss
24	Knightdale	School	Heater Well Co.	78	6		20	Gneiss
25	Garner	Pure Oil Co.	Heater Well Co.	147	6	81	15	Gneiss
26	Raleigh	City Airport	Heater Well Co.	100	6	48	15	Gneiss
27	Rhamkatt	School	Heater Well Co.	327½	6		10	Gneiss
28	Cary (well at tank)	Town	Heater Well Co.	320	8		40	Gneiss
29	Cary (500 feet east of tank)	Town	Heater Well Co.	300	8		25	Gneiss
30	Cary, ¼ mile east of	Town	Heater Well Co.	320	8		25	Gneiss

Franklin County

1	Youngsville (on a hill)	Town	Heater Well Co.	425	8		0	Granite
2	Youngsville (in a draw)	Town	Heater Well Co.	245	8		75	Granite
3	Youngsville	T. C. Lloyd	Heater Well Co.	54	6	22	30	Granite ?
4	Pilot	School	Heater Well Co.	128	6		?	Granite
5	Pilot	E. P. Privett	Heater Well Co.	135	6	98	8	Granite

RECORDS OF WELLS IN THE NEUSE RIVER BASIN

No.	Location	Owner	Driller	Depth (feet)	Diam- eter (inches)	Depth of casing	Yield gallons per minute	Aquifer
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Nash County

1	Samaria	Ferrells School	C. W. Norton	160	6		10	Schist
2	Stanhope	School	C. W. Norton	140	6	85	8	Schist
3	Bailey	Town	Heater Well Co.	246 $\frac{1}{2}$	8	108	25	Schist
4	Bailey	High School (used by town)	C. W. Norton	350	8		25	Schist
5	Bailey	Stone's Sawmill	Heater Well Co.	159	6	70	25	Schist
6	Mt. Pleasant	School	C. W. Norton	165	6	80	40	Schist
7	Middlesex	Williams Cotton Gin	Sydnor Pump Co.	138	6		20+*	Schist
8	Middlesex $\frac{1}{2}$	Town	?	103	6		50+	Schist

109

Johnston County

1	Clayton**	Town	Sydnor Pump Co.	300-350	8		40-60	Granite
2	Clayton, at tank on hill	Town	Sydnor Pump Co.	300+	8		20-30	Granite
3	Clayton, near depot	Town	Va. Mach. Co.	340	8		60	Granite
4	Clayton, in a draw	Town	Sydnor Pump Co.	315	8		40	Granite
5	Selma	Town	C. W. Norton	306	8	61	200	Schist
6	Selma, 18 feet from well 5	Town	Heater Well Co.	303	8		200	Schist
7	Selma	Town	C. W. Norton	181	8		175	Schist
8	Smithfield	Carolina Packing Co.	Heater Well Co.	176	8	38	30	Schist

*Drawdown 9 feet at 11 gallons a minute.

$\frac{1}{2}$ Two wells, same depth and yield

**This well and 2 other similar wells are in valley west of town.

RECORDS OF WELLS IN THE NEUSE RIVER BASIN

No.	Location	Owner	Driller	Depth (feet)	Diam- eter (inches)	Depth of casing	Yield gallons per minute	Aquifer	Remarks
Johnston County (cont'd)									
9	Smithfield	Carolina Packing Co.	Heater Well Co.	197	8	31	40	Schist	
10	Kenly, at tank	Town	Heater Well Co.	70	8		50	Schist	
11	Kenly	Town	Heater Well Co.	70	8		50	Schist	
12	Princeton	Town	Va. Mach. Co.	140½	8	40±	100	Schist	
13	Benson	Town	Sydnor Pump Co.	550	10		240	Schist	
14	Benson	Oil Mill	?	418	8	100?	80	Schist	
Wilson County									
1	Sims	School (white)	C. W. Norton	128	6		15	Schist	Water con- tains much iron.
2	Rock Ridge	School	C. W. Norton	240	6		15	Schist	Well flowed
3	Bullocks	School	C. W. Norton	159	6		63	Granite	63 gallons a minute when drilled
4	Wilson	Country Club	C. W. Norton	125	6		35	Granite	Rock at 8 feet.
5	Wilson	Coca Cola Plant	C. W. Norton	146	6		6	Granite	Cased 60 ft
6	Wilson	Hackney Body Co.	C. W. Norton	101½	6		15	Granite	
7	Stantonsburg	Town	Carolina Drill Co.	120	24		300	Sand	Gravel- walled well
8	Lucama	Town	Sydnor Pump Co.	191	8		100	Schist	Tuscaloosa formation. Water con- tains much iron.

RECORDS OF WELLS IN THE NEUSE RIVER BASIN

No.	Location	Owner	Driller	Depth (feet)	Diam- eter (inches)	Yield gallons per minute	Aquifer	Remarks
Wayne County								
1	Goldsboro, 4 miles SE of	Seymour Johnson Field	Carolina Drill Co.	189	22	400	Sand (Tuscaloosa? and Black Creek)	Gravel-Walled well; 8-inch casing.
2	Goldsboro, 4 miles SE of	Seymour Johnson Field	Carolina Drill Co.	171	22	360	Sand (Tuscaloosa? and Black Creek)	Gravel-walled, 8-inch casing, well.
3	Goldsboro, 4 miles SE of	Seymour Johnson Field	Carolina Drill Co.	180	22	720	Sand (Tuscaloosa? and Black Creek)	Gravel-walled well; 8-inch casing
4	Goldsboro, 4 miles SE of	Seymour Johnson Field	Carolina Drill Co.	150	22	325	Sand (Black Creek)	Gravel-walled well; 8-inch casing.
5	Goldsboro, 4 miles SE of	Seymour Johnson Field	Carolina Drill Co.	165	22	120	Sand (Tuscaloosa? and Black Creek)	Gravel-walled well; 8-inch casing.
6	Goldsboro, 4 miles SE of	Seymour Johnson Field	Carolina Drill Co.	125	22	400	Sand (Black Creek)	Gravel-walled well; 8-inch casing.
7	Goldsboro, 4 miles SE of	Seymour Johnson Field	Carolina Drill Co.	118	22	450	Sand (Black Creek)	Gravel-walled well; 8-inch casing.
8	Goldsboro, 4 miles SE of	Seymour Johnson Field	Carolina Drill Co.	115	22	450	Sand (Black Creek)	Gravel-walled well; 8-inch casing.
9	Goldsboro, 4 miles SE of	Seymour Johnson Field	Layne Atlantic Co.	100	18	250	Sand (Black Creek)	Gravel-walled well; 8-inch casing.
10	Goldsboro, 4 miles SE of	Dewey Brothers	Heater Well Co.	49	6	25	Sand	Sand from 30 to 48 feet.

RECORDS OF WELLS IN THE NEUSE RIVER BASIN

No.	Location	Owner	Driller	Depth (feet)	Diameter (inches)	Yield gallons per minute	Aquifer	Remarks
Wayne County (cont'd)								
11	Goldsboro	H. Weil & Co. Town	Heater Well Co.	52	6	20	Sand	Sand from 45 to 52 feet.
12	Fremont	Town	Va. Mach Co.	596	10	80	Schist	Basement rock at 90 feet.
13	Fremont	Town	Layne Atlantic Co.	40	26	23	Sand	Gravel-walled well; 13-inch casing
14	Fremont	Fremont Oil Mill Co.	Syndnor Pump Co.	177	4½	40	Schist	Cased 102 feet.
15	Pikeville	Town	Heater Well Co.	254½	12	6	Schist	Cased 140 feet.
16	Mount Olive	Town	Carolina Drill Co.	174	10	150	Sand (Black Creek)	Screened.
17	Mount Olive	Town	T. W. Callahan	170	10	160	Sand (Black Creek)	Screened.
18	Mount Olive	Town	Lowry	135	10	90	Sand (Black Creek)	Screened.
Lenoir County								
1	La Grange	Town	Carolina Drill Co.	332	24	175	Sand (Tuscaloosa?)	Gravel-walled wells; 8-inch casing.
2	La Grange	Town	Syndnor Pump Co.	180	10	125	Sand (Black Creek)	
3	Kinston, 4 miles north of	Airport	Heater Well Co.	100	8	110	Sand (Black Creek)	
4	Kinston, 4	Airport	Heater Well Co.	100	8	110	Sand (Black Creek)	
5	Kinston	City	Layne Atlantic Co.	375	18	860	Sand (Black Creek)	Gravel-walled wells;
6	Kinston	City	Layne Atlantic	370	18	700	Sand (Black Creek)	8-inch casing.
7	Grifton	J. Worthington	Mr. Goodman	230	2	2½	Sand	Well flows.
Greene County								
1	Walstonburg	Town	Carolina Drill Co.	240	24	74	Sand (Tuscaloosa?)	Gravel-walled well, 8-inch casing.
2	Snow Hill	Tidewater Power Co.	Layne Atlantic Co.	260	8-6	295	Sand (Tuscaloosa?)	Flows 80 gallons a minute
3	Hookerton	Town	Dawson	100±	1¼	15	Sand (Black Creek)	Public supply. Two wells, flow 10 feet above surface.
4	Hookerton	Town	Dawson	100±	4	20	Sand (Black Creek)	Also 1 well, 2 inches in diameter.

RECORDS OF WELLS IN THE NEUSE RIVER BASIN

No.	Location	Owner	Driller	Depth (feet)	Diameter (inches)	Yield gallons per minute	Aquifer	Remarks
Pitt County								
1	Fountain	Town	Sydnor Pump Co.	194	8	160	Sand (Tuscaloosa?)	
2	Farmville	Town	Layne Atlantic Co.	503	18	340)		
3	Farmville	Town	Layne Atlantic Co.	480	20	500)--	Sand (Tuscaloosa?)	Gravel-walled wells; 8-inch casing.
4	Farmville	Town	Layne Atlantic Co.	472	26	130)		
5	Winterville	Town	Layne Atlantic Co.	157	6	80	Sand (Black Creek)	
5a	Winterville	Town	Carolina Drill Co.	306	24	400	Sand (Black Creek)	Gravel-walled well, 8-inch casing.
6	Ayden	Town	Carolina Drill Co.	152	24	200	Sand (Black Creek)	Gravel-walled well; 8-inch casing.
7	Grifton	Town	Cox	280	1 1/4	8	Sand (Black Creek)	Well flows; 4 similar wells in Grifton.
Jones County								
1	Trenton	County	F. D. Kennedy	212	3	35	Limestone	Peedee formation ?
2	Pollocksville	Air Base	Heater Well Co.	67	8	180	Limestone (Trent)	Drawdown 8.5 feet at 180 gallons a minute.
3	Pollocksville	Town	C. S. McDaniel	62	6	275	Limestone (Trent)	Not used; town supply abandoned.
Craven County								
1	New Bern	City	Layne Atlantic Co.	80	18	250	Limestone (Trent)	Eight gravel-walled wells 80 to 115 feet deep; 8-inch casing; tested at 250 gallons a minute. Small drawdown
2	New Bern	City	Heater Well Co.	100	8	1000	Limestone (Trent)	(City has many wells similar depths and yields.) Wells abandon-
3	New Bern	City	A. L. Lupton	100	8	500	Limestone (Trent)	ed because of contamin- ation by brackish water.

RECORDS OF WELLS IN THE NEUSE RIVER BASIN

No.	Location	Owner	Driller	Depth (feet)	Diam- eter (inches)	Yield gallons per minute	Aquifer	Remarks
Craven County (cont'd)								
4	Cherry Point	U. S. Marines Well No. 56	Heater Well Co.	242	8	514	Limestone (Trent)	Drawdown 5.2 feet at 514 gallons a minute. Twelve supply wells on base average 250 feet deep, yield 38 gallons a minute per foot of drawdown.
5	Cherry Point	U. S. Marines Well No. 59	Heater Well Co.	327	8	413	Castle Hayne marl	Tested at 413 gallons a minute with 6.73 feet drawdown.
6	Cherry Point	U. S. Marines	Heater Well Co.	105	8	190	Limestone (Duplin)	Test well 1. Other test wells indicated large yields of water between 100 and 400 feet.
Carteret County								
1	Bogue	Marine Air Base	Heater Well Co.	260	8	225	Sand	Drawdown 18.7 feet at 225 gallons a minute.
2	Morehead City	Tidewater Power Co.	Av. 250	6	6	Av. 200	Limestone (Trent)	City supplied by 4 wells.
3	Beaufort	Tidewater Power Co.	440	10-8	10-8	500	Limestone (Trent and Castle Hayne)	Water from horizons at 300 and 400 feet.
4	Beaufort	U. S. Biological Station	269	3	3	25	Limestone (Trent)	Flows at high tide.
5	Morehead City	Naval Section Base	235	8	8	300	Limestone (Trent)	Drawdown 6 feet at 300 gallons a minute.
6	Atlantic	Marine Air Base	408	8	8	240	Limestone (Trent)	Drawdown 8 feet at 240 gallons a minute.

RECORDS OF WELLS IN THE NEUSE RIVER BASIN

No.	Location	Owner	Driller	Depth (feet)	Diameter (inches)	Yield gallons per minute	Aquifer	Remarks
Pamlico County								
1	Grantsboro	Fleishel Lumber Co.	A. L. Lupton	275	6-4	50	Limestone	(Supplies several
2	Bayboro	Court House	?	273	3			(buildings.
3	Oriental	Town		270				Flows $\frac{5}{4}$ gallon a
								minute
4	Minnesott Beach	Namon Hardison	A. L. Lupton	235	3.	60	Limestone ?	Flowing well.



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